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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
8 April 2004 (08.04.2004)

PCT

(10) International Publication Number
WO 2004/028341 A2

(51) International Patent Classification[7]: A61B

(21) International Application Number: PCT/US2003/029906

(22) International Filing Date: 25 September 2003 (25.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

10/255,120	25 September 2002 (25.09.2002)	US
10/419,723	18 April 2003 (18.04.2003)	US
10/650,120	27 August 2003 (27.08.2003)	US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier applications:

US	10/650,120 (CON)
Filed on	27 August 2003 (27.08.2003)
US	10/419,723 (CIP)
Filed on	18 April 2003 (18.04.2003)
US	10/255,120 (CIP)
Filed on	25 September 2002 (25.09.2002)
US	10/067,514 (CIP)
Filed on	4 February 2002 (04.02.2002)
US	09/811,352 (CIP)
Filed on	19 March 2001 (19.03.2001)

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(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/028341 A2

(54) Title: SUSCEPTIBILITY GENE FOR HUMAN STROKE; METHODS OF TREATMENT

(57) Abstract: A role of the human PDE4D gene in stroke is disclosed. Methods for diagnosis, prediction of clinical course and treatment for stroke using polymorphisms in the PDE4D gene are also disclosed.

SUSCEPTIBILITY GENE FOR HUMAN STROKE; METHODS OF TREATMENT

RELATED APPLICATIONS

This application is a continuation of and claims priority to U.S. Application No. 10/650,120, filed August 27, 2003, which is a continuation-in-part of U.S. Application No. 10/419,723 filed April 18, 2003, which is a continuation-in-part of U.S. Application No. 10/255,120, filed September 25, 2002, which is a continuation-in-part of U.S. Application No. 10/067,514, filed February 4, 2002, which is a continuation-in-part of U.S. Application No. 09/811,352, filed March 19, 2001. The entire teachings of the above applications are incorporated herein by reference.

BACKGROUND OF THE INVENTION

Stroke is a common and serious disease. Each year in the United States more than 600,000 individuals suffer a stroke and more than 160,000 die from stroke-related causes (Sacco, R.L. *et al., Stroke* 28, 1507-17 (1997)). In western countries stroke is the leading cause of severe disability and the third leading cause of death (Bonita, R., *Lancet* 339, 342-4 (1992)). The lifetime risk of those who reach the age of 40 exceeds 10%.

The clinical phenotype of stroke is complex but is broadly divided into ischemic (accounting for 80-90%) and hemorrhagic stroke (10-20%) (Caplan, L.R. *Caplan's Stroke: A Clinical Approach*, 1-556 (Butterworth-Heinemann, 2000)). Ischemic stroke is further subdivided into large vessel occlusive disease (referred to here as carotid stroke), usually due to atherosclerotic involvement of the common and internal carotid arteries, small vessel occlusive disease, thought to be a non-atherosclerotic narrowing of small end-arteries within the brain, and cardiogenic stroke due to blood clots arising from the heart usually on the background of atrial fibrillation or ischemic (atherosclerotic) heart disease (Adams, H.P., Jr. *et al., Stroke* 24, 35-41 (1993)). Therefore, it appears that stroke is not one disease but a heterogeneous group of disorders reflecting differences in the pathogenic mechanisms (Alberts, M.J. *Genetics of Cerebrovascular Disease*, 386 (Futura

Publishing Company, Inc., New York, 1999); Hassan, A. & Markus, H.S. *Brain* 123, 1784-812 (2000)). However, all forms of stroke share risk factors such as hypertension, diabetes, hyperlipidemia, and smoking (Sacco, R.L. *et al., Stroke* 28, 1507-17 (1997); Leys, D. *et al., J. Neurol.* 249, 507-17 (2002)). Family history of stroke is also an independent risk factor suggesting the existence of genetic factors that may interact with environmental factors (Hassan, A. & Markus, H.S. *Brain* 123, 1784-812 (2000); Brass, L.M. & Alberts, M.J. *Baillieres Clin. Neurol.* 4, 221-45 (1995)).

The genetic determinants of the common forms of stroke are still largely unknown. There are examples of mutations in specific genes that cause rare Mendelian forms of stroke such as the *Notch3* gene in CADASIL (cerebral autosomal dominant arteriopathy with subcortical infarctions and leukoencephalopathy) (Tournier-Lasserve, E. *et al., Nat. Genet.* 3, 256-9 (1993); Joutel, A. *et al., Nature* 383, 707-10 (1996)), *Cystatin C* in the Icelandic type of hereditary cerebral hemorrhage with amyloidosis (Palsdottir, A. *et al., Lancet* 2, 603-4 (1988)), *APP* in the Dutch type of hereditary cerebral hemorrhage (Levy, E. *et al., Science* 248, 1124-6 (1990)) and the *KRIT1* gene in patients with hereditary cavernous angioma (Gunel, M. *et al., Proc. Natl. Acad. Sci. USA* 92, 6620-4 (1995); Sahoo, T. *et al., Hum. Mol. Genet.* 8, 2325-33 (1999)). None of these rare forms of stroke occur on the background of atherosclerosis, and therefore, the corresponding genes are not likely to play roles in the common forms of stroke which most often occur with atherosclerosis.

It is very important for the health care system to develop strategies to prevent stroke. Once a stroke happens, irreversible cell death occurs in a significant portion of the brain supplied by the blood vessel affected by the stroke. Unfortunately, the neurons that die cannot be revived or replaced from a stem cell population. Therefore, there is a need to prevent strokes from happening in the first place. Although we already know of certain clinical risk factors that increase stroke risk (listed above), there is an unmet medical need to define the genetic factors involved in stroke to more precisely define stroke risk. Further, if predisposing alleles are common in the general population and the specificity of predicting a disease based on their presence is low, additional loci such as protective loci are needed for

meaningful prediction of disposition of the disease state. There is also a great need for therapeutic agents for preventing the first stroke or further strokes in individuals who have suffered a previous stroke or transient ischemic attack.

SUMMARY OF THE INVENTION

A locus conferring susceptibility to ischemic stroke to chromosome 5q12 in the Icelandic population has been mapped and the identification of phosphodiesterase 4D (*PDE4D*) as the gene at 5q12 contributing to the risk of ischemic stroke has been reported. This locus was extensively fine mapped and tested for association to stroke. Most striking is that haplotypes can be classified into three distinct groups: wild type, at-risk and protective. Additionally, a significant disregulation of multiple PDE4D isoforms in stroke patients was observed. The strongest association was within the *PDE4D*, especially to the two major subtypes of ischemic stroke, carotid and cardiogenic stroke. We have found variation in PDE4D that more than doubles the risk for cardiogenic and carotid stroke, two of the most common forms of ischemic stroke. We have shown that there are at least 9 isoforms of PDE4D at the mRNA level and the protein level. The basis for these isoforms is the use of alternative 5 prime exons that are alternatively spliced into a common set of exons defining the catalytic domain as well as, in the case of the long forms, a set of exons defining a common core in the regulatory domain. The PDE4D gene is involved in the pathogenesis of stroke. The PDE4D gene may be involved through artherosclerosis, the major pathological process underlying ischemic stroke. Our results indicate that atherosclerosis is a cAMP disease resulting from disregulation of its levels within the vasculature.

In one aspect, the invention relates to methods of diagnosing a predisposition to stroke. The methods of diagnosing a predisposition to stroke in an individual include detecting the presence of a polymorphism in PDE4D, as well as detecting alterations in expression of a PDE4D polypeptide or isoform, such as the presence of, or relative expression of different splicing variants of PDE4D polypeptides. For example, it may be that the ratio of certain splice variants could be used as a diagnostic marker for stroke predisposition. Also an abnormal splice form can be detected (that is one that is not normally expressed but is created from a DNA sequence mutation that leads to an abnormal splice form to be created from the primary transcript) may be created from mutations in the PDE4D gene. For example,

new splice sites might be created from a single base substitution within an intron that is inappropriately used as a splice acceptor or donor site, resulting in an abnormal message which is likely to have a premature stop codon leading to a truncated form of PDE4D protein. The alterations in expression can be quantitative, qualitative, or both quantitative and qualitative. The methods of the invention allow the accurate diagnosis of stroke at or before disease onset, thus reducing or minimizing the debilitating effects of stroke. The methods of the invention also diagnose those individuals who are protected against developing stroke even in the face of other risk factors including but not restricted to hypertension, diabetes, hyperlipidemia, smoking history, previous stroke, TIA, MI or PAOD, or carriers of stroke associated gene variants. In one embodiment, predisposition to stroke or susceptibility to stroke can be assessed by determining PDE4D isoform levels in the individual compared to control levels, wherein a difference in isoform expression is indicative of predisposition or susceptibility to stroke. Preferably, the level of expression of PDE4D7 and/or PDE4D9 is assessed.

The invention additionally relates to an assay for identifying agents that alter (*e.g.*, enhance or inhibit) the activity or expression or transcription of one or more PDE4D polypeptides or isoforms. Such an assay may also identify agents that alter the relative expression of one or more PDE4D isoforms with respect to other isoforms at either the mRNA level or polypeptide level. For example, a cell, cellular fraction, or solution containing a PDE4D polypeptide or a fragment or derivative thereof, can be contacted with an agent to be tested, and the level of PDE4D polypeptide expression or activity can be assessed. Alternatively, a cell, or cell with artificial DNA construct with part or all of the PDE4D gene with or without a reporter gene can be used to identify agents that may directly affect transcription at one or more of the many alternative PDE4D promoters upstream of the alternative 5 prime exons or splicing efficiency of the primary transcript to one or more mRNA isoforms. The activity or expression of more than one PDE4D polypeptides can be assessed concurrently (or the corresponding reporter gene activity) (*e.g.*, the cell, cellular fraction, or solution can contain more than one type of PDE4D polypeptide, such as different splicing variants, and the levels of the different polypeptides or splicing mRNA variants can be assessed).

Agents that enhance or inhibit PDE4D mRNA or polypeptide expression or activity are also included in the current invention, as are methods of altering (enhancing or inhibiting) PDE4D mRNA or polypeptide expression or activity by contacting a cell containing PDE4D gene, mRNA, and/or polypeptide, or by contacting the PDE4D gene, mRNA, and/or polypeptide, with an agent that enhances or inhibits expression or activity of PDE4D mRNA or polypeptide. In another embodiment, isoform mRNA and/or protein levels can be altered, compared to control levels, using the agents of the invention.

Additionally, the invention pertains to pharmaceutical compositions comprising the nucleic acids of the invention, the polypeptides of the invention, and/or the agents that alter activity of PDE4D polypeptide. The invention further pertains to methods of treating stroke, by administering PDE4D therapeutic agents, such as nucleic acids of the invention, polypeptides of the invention, the agents that alter activity of PDE4D polypeptide, or compositions comprising the nucleic acids, polypeptides, and/or the agents that alter activity of PDE4D polypeptide.

The invention further relates to methods for preventing the occurrence of stroke in an individual in need thereof by regulating a PDE4D mRNA and/or polypeptide isoform level compared to control levels, whereby the regulated isoform level mimics the level of a healthy individual. Isoform expression at the mRNA and/or polypeptide level can be regulated using the agents and pharmaceutical compositions of the invention, by genetic alteration, by altering the ratio of isoforms and/or their absolute expression. In one embodiment, isoforms PDE4D7 and/or PDE4D9 can be regulated.

The invention further provides a method of diagnosing susceptibility to stroke in an individual. This method comprises screening for one of the at-risk haplotypes in the phosphodiesterase 4D gene that is more frequently present in an individual susceptible to stroke, compared to the frequency of its presence in the general population, wherein the presence of an at-risk haplotype is indicative of a susceptibility to stroke. An "at-risk haplotype" is intended to embrace one or a combination of haplotypes described herein over the PDE4D gene that show high correlation to stroke. In one embodiment, the at-risk haplotype is characterized by the presence of at least one single nucleotide polymorphism at nucleic acid positions

at risk haplotype 1 is G at nucleic acid position 142780 respectively, relative to SEQ ID NO: 1 and allele 0 of microsatellite marker AC0088181-1. In another embodiment, the at-risk haplotype 2 is characterized by the presence of at least one single nucleotide polymorphism and microsatellite marker at nucleic acid positions 142780, 135112, 132562, 131865, 129361, 129360, 125304, 123426, 123312, 120628, 118914, 111781, 111252, 109301, 107849, 105225, 104552, 102977, 100795, 99035, 88614, 88456, 83119, 82244, 80127, 78552, relative to SEQ ID NO: 1 and allele 0 microsatellite marker AC0088181-1.

In yet another embodiment, the at-risk haplotype 3 is characterized by the presence of at least one polymorphism at nucleic acid positions 138806, 131865, 129361, 120628, 91470 relative to SEQ ID NO: 1.

Also described are methods for diagnosing susceptibility to stroke in an individual comprising screening for an at-risk haplotype in the phosphodiesterase 4D gene that is more frequently present in an individual susceptible to stroke (affected), compared to the frequency of its presence in a healthy individual (control) wherein the screening for the presence of an at-risk haplotype within or near PDE4D that significantly correlates with at least one of the haplotypes described herein or stroke susceptibility. As an example of a simple test for correlation would be a Fisher-exact test on a two by two table. Given a cohort of chromosomes the two by two table is constructed out of the number of chromosomes that include both of the haplotypes, one of the haplotype but not the other and neither of the haplotypes.

A protective haplotype is intended to embrace one or a combination of haplotypes described herein over the PDE4D gene that show a protective characteristic or property of a reduced risk of stroke. The particular combination of genetic markers (haplotypes) are present at a higher than expected frequency in controls than patients. Individuals with a protective allele or haplotype are about 30% less likely to have a stroke compared to the general population. In one embodiment, a protective haplotype is characterized by the presence of at least one single nucleotide polymorphism, such as the allele A at nucleotide position 142780 relative to SEQ ID NO: 1. The presence of the polymorphisms that comprise the at-risk haplotype or protective haplotype can be determined by electrophoretic analysis, restriction length polymorphism analysis, fluorescence energy transfer detection,

kinetic PCR, allele specific PCR, sequence analysis, hybridization analysis or other known techniques.

Kits for diagnosing susceptibility to stroke in an individual are also disclosed and comprise primers for nucleic acid amplification of a region of PDE4D comprising the at-risk haplotype and/or protective haplotype.

The first major application of the current invention involves prediction of those at higher risk of developing a stroke. Diagnostic tests that define genetic factors contributing to stroke might be used together with or independent of the known clinical risk factors to define an individual's risk relative to the general population. Better means for identifying those individuals at risk for stroke should lead to better prophylactic and treatment regimens, including more aggressive management of the current clinical risk factors such as hypertension, diabetes, hypercholesterolemia, hypertriglyceridemia, obesity, and inflammatory components as reflected by increased C-reactive protein levels or other inflammatory markers. Information on genetic risk may be used by physicians to help convince particular patients to adjust life style and quit smoking. This invention provides the means to define a genetic component that doubles an individual's risk for stroke. Also described are means to define the genetic components that protect an individual from stroke.

The second major application of the current invention is the specific identification of a rate-limiting pathway involved in stroke. While many have attempted to find genes that are over-expressed or under-expressed in atherosclerosis plaques in the carotid arteries, the vast majority of the changes seen in diseased blood vessels compared to normal blood vessels are simply a reaction to the underlying process of atherosclerosis and stroke predisposition and are not the underlying cause. A disease gene with genetic variation that is significantly more common in stroke patients as compared to controls represents a specifically validated causative step in the pathogenesis of stroke. That is, the uncertainty about whether a gene is causative or simply reactive to the disease process is eliminated. The protein encoded by the disease gene defines a rate-limiting molecular pathway involved in the biological process of stroke predisposition. The proteins encoded by such stroke genes or its interacting proteins in its molecular pathway may represent drug targets that may be

selectively modulated by small molecule, protein, antibody, or nucleic acid therapies. Such specific information is greatly needed since stroke prevention and treatment is a major unmet medical need that affects over a half-million Americans each year. Also useful is determining the gene that is protective against stroke. The proteins encoded by the protective gene and the biological pathway that it is a member may represent another target selectively modulated by small molecule, protein antibody or nucleic acid therapies.

A third application of the current invention is its use to predict an individual's response to a particular drug, even drugs that do not act on PDE4D or its pathway. It is a well-known phenomenon that in general, patients do not respond equally to the same drug. Much of the differences in drug response to a given drug is thought to be based on genetic and protein differences among individuals in certain genes and their corresponding pathways. Our invention defines the PDE4D pathway and its effect on cAMP levels in cells where it is expressed as one key molecular pathway involved in stroke risk. Some current or future therapeutic agents may be able to affect this pathway directly or indirectly and therefore, be effective in those patients whose stroke risk is in part determined by PDE4D pathway genetic variation. On the other hand, those same drugs may be less effective or ineffective in those patients who do not have at risk variation in the PDE4D gene or pathway. Therefore, PDE4D variation or haplotypes may be used as a pharmacogenomic diagnostic to predict drug response and guide choice of therapeutic agent in a given individual.

The invention helps meet the unmet medical needs in at least two major ways: 1) it provides a means to define patients at higher risk for stroke than the general population who can be more aggressively managed by their physicians in an effort to prevent stroke; and 2) it defines a drug target that can be used to screen and develop therapeutic agents that can be used to prevent stroke before it happens or prevent a second stroke in those who have already suffered a stroke or transient ischemic attack.

BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects, features and advantages of the invention will be apparent from the following more particular description of certain embodiments of the invention, as illustrated in the accompanying drawings.

FIGS. 1.1 and 1.2 show two family pedigrees each affected by several of the stroke subtypes, including hemorrhagic stroke.

FIGS. 2.1, 2.2 and 2.3 show the genetic, combined and physical maps for locating the PDE4D gene using 30 polymorphic markers. For the combined map, all markers have been assigned in the genetic and physical map unless otherwise indicated (* indicates marker only assigned in the physical map; ** indicates markers only assigned in genetic map).

FIG. 3 shows the schematic representations of PDE4D splice variants. Splice variants PDE4D9 are novel, as well as exons D7A-1, D7A-2, D7A-3, D8 and D9. Splice variants 4DN1, 4DN2 and 4DN3 (Miro, *et al., Biochem. Biophys. Res. Comm.,* 274: 415-421 (2002), and 4D1, 4D2, 4D3, 4D4 and 4D5 are known (Bolger *et al., Biochem. J.* pt. 2: 539-548 (1997).

FIG. 4 is a graphic representation showing PDE4D isoform expression in EBV transformed cells (expression of PDE4D3 and PDE4D9 below detection limits).

FIG. 5 is a graphic representation showing expression of PDE4D isoforms in EBV transformed cells from patients with or without the stroke-associated haplotype.

FIG. 6 is a graphic representation showing expression of PDE4D isoforms in EBV cells from controls with or without the stroke-associated haplotype.

FIGS. 7.1 to 7.10 show the amino acid sequences for the isoforms of the PDE4D gene. SEQ ID NO: 2 is D4; SEQ ID NO: 3 is N2; SEQ ID NO: 4 is D5; SEQ ID NO: 5 is N3; SEQ ID NO: 6 is D3; SEQ ID NO: 7 is N1; SEQ ID NO: 8 is D8; SEQ ID NO: 9 is D1; and SEQ ID NO: 10 is D2.

FIGS. 8.1 and 8.2 list all publicly available PDE4D mRNAs and novel cDNA segments identified by deCODE genetics.

FIGS. 9.1 to 9.351 show the genomic sequence of the human PDE4D gene.

FIGS. 10.1 to 10.3 show a graphic representation showing the single marker allelic association within the PDE4D gene. FIG. 10.1 is a schematic showing the gene structures. FIG. 10.2 shows graphic representation of the microsatellite and

SNP distribution within thePDE4D gene. FIG. 10.3 shows graphic representation of the single marker allelic association across the PDE4D gene for both microsatellites (filled circles) and SNPs (open circles); negative log p-valve versus the physical location in kilobases.

FIGS. 11.1 to 11.3 graphically depict the haplotype association for carotid and cardiogenic stroke combined. Estimated haplotype frequencies for patients and controls respectively, are indicated within parentheses. FIG. 11.1 is a comparison of groups of haplotypes constructed from SNP45 and AC008818-1, two markers separated by 6kb. Note that X is a *composite* allele that denotes jointly all alleles of AC008818-1 except allele 0. Apart from haplotype A0 that is not found in our samples, other haplotypes can be grouped into three groups with distinct risks. Each arrow corresponds to a comparison between two groups and RR is the estimated risk of the group the arrow is pointing at relative to the other group. The difference between 1 and the information (Info) is a measure of the fraction of information that is lost due to uncertainty in phase and missing genotypes. FIG. 11.2 shows intermediate results when the investigation is extended from SNP45 and AC008818-1, which are both in LD block B, to include 25 SNPs in LD block C. H_C is the at-risk haplotype, identified in FIG. 13 and L_C is a composite haplotype that denotes jointly all haplotypes of the 25 SNPs except H_C. Together with AC008818-1 and SNP45, the haplotypes here span 64kb. Haplotype G0 in A is split into extended haplotypes G0H_C and G0L_C. G0H_C has significantly higher risk than G0L_C, and the risk of G0L_C is not distinguishable from the wild type GX. FIG. 11.3 shows a refinement of the groupings in A — G0L_C is moved from the at-risk group to the wild type group. Also noted is that the extended haplotype AXH_C does not exist indicating that blocks B and C are in LD.

FIG. 12 is a schematic representation of the physical map of *STRK1* interval showing all genes and mRNAs in region. Markers identified with an asterisk (*) indicate those with significant single marker association.

FIGS 13.1 to 13.3 show a graphical depiction of the linkage disequilibrium (LD) and haplotypes in the 5'end of PDE4D gene. FIG. 13.1 shows pairwise linkage disequilibrium between SNPs in a 600 kb region in the 5' end of *PDE4D*. The markers are plotted equidistant. Two measures of LD are shown: *D*' in the upper left

triangle and p-values in the lower right triangle. This region can be divided into three blocks of strong LD, each with limited haplotype diversity, block A, block B and block C. The lines indicate the position of the three exons D7-1, D7-2 and D7-3 and the microsatellite marker AC008818-1. FIG. 13.2 show all common haplotypes identified within each of the three blocks. Association results for all the haplotypes are presented in Table 2C. FIG. 13.3 depicts the percentage of chromosomes within each block that match one of the common haplotypes.

DETAILED DESCRIPTION OF THE INVENTION

The first major stroke locus, *STRK1*, was mapped to 5q12 using a genome-wide search for susceptibility genes in the common forms of stroke. A broad but rigorous definition of the phenotype was used including patients with ischemic stroke, transient ischemic attack (TIA), and hemorrhagic stroke. The lod score after adding a higher density of markers (one marker every 1 cM) was 4.40 ($P=3.9x10^{-6}$) at marker D5S2080. The lod score increased to 4.9 after the hemorrhagic stroke patients were removed, suggesting that the gene at the locus is primarily important for ischemic stroke. The most promising region harboring a stroke susceptibility gene was narrowed down to a segment less than 6 cM (approximately 3.8 Mb), from D5S1474 to D5S398, as defined by a decrease of one in LOD score (will be referred to as the "one-LOD interval" hereafter).

We describe here the positional cloning of a stroke susceptibility gene located in the *STRK1* locus. This region was extensively fine-mapped and tested for association to stroke. The strongest association found in the one-LOD interval was within the phosphodiesterase 4D gene (*PDE4D*), a member of the large superfamily of cyclic nucleotide phosphodiesterases. The strongest signal observed at *PDE4D* was to the two major subtypes of ischemic stroke, carotid and cardiogenic stroke. Relative expression of PDE4D isoforms correlated with stroke and with the genetic variation within PDE4D which is associated to stroke. Our results suggest that this gene is involved in pathogenesis of stroke through atherosclerosis, the major pathological process underlying stroke.

Our results also indicate that genetic variation in the *PDE4D* gene is associated with ischemic stroke. The direct involvement of *PDE4D* is strongly supported by both

linkage and haplotype association. Multiple markers and haplotypes within the *PDE4D* gene show strong association to stroke. The haplotypes can be classified into three distinct groups, wild type, at-risk and protective. We first identified the association using microsatellite markers, and supplementing the microsatellite data with a denser set of SNPs further supported this. The strongest association was to the two ischemic subtypes, carotid and cardiogenic stroke. This gene shows no association to small vessel occlusive disease, the form of stroke thought to be independent of atherosclerosis. Haplotype analyses show that the most significant haplotype extends over an area of 260 kb covering the first exon of the *PDE4D* gene. The haplotype is significantly associated to carotid and cardiogenic stroke with a relative risk of 2.3 and approximately 47 % of carotid/cardiogenic stroke patients carry at least one copy of this haplotype. This same haplotype has a relative risk of 1.8 for stroke in general. This haplotype extends over the 5'exon unique to the PDE4D7 isoform and the presumed promoter region of this isoform suggesting that the functional variation may be involved in transcriptional regulation. This hypothesis is also supported by our PDE4D expression analysis that shows that there is significant correlation between the disease associated haplotype and the level of PDE4D7 message.

The strongest association found for this PDE4D haplotype was to the two major subtypes of ischemic stroke, carotid and cardiogenic stroke suggesting a role for this gene in the vascular biology of atherosclerosis. While there are multiple etiologies for ischemic stroke, atherosclerosis remains the most important one. Atherosclerosis is a chronic progressive disease characterized by accumulation of lipids, fibrous, and cellular elements within the large arteries. These lesions can grow sufficiently large to impede blood flow and, more importantly, their surfaces can rupture leading to local thrombus formation occluding the blood vessel and causing a stroke or myocardial infarction. The major pathological process for the two ischemic subtypes, carotid and cardiogenic stroke is atherosclerosis. First, it is the major cause of stenotic and occlusive lesions of the internal and common carotids that lead to carotid strokes. Second, cardiac thrombi which shed emboli to the brain most commonly occur on the background of coronary artery disease, such as following acute myocardial infarction or ischemic cardiomyopathy, and/or due to atrial fibrillation on the basis of poor compliance of ischemic ventricles (diastolic dysfunction/stiffening). Although atrial fibrillation may occur on the background of

other diseases such as valvular disease, hyperthyroidism, and hypertension, in the age group that tends to suffer from stroke, ischemic heart disease remains one of the most important causes. Ischemic stroke resulting from occlusion of small penetrating arteries within the brain (small vessel occlusive disease or lacunar stroke) is generally thought to result from local endothelial proliferation since atherosclerosis only occurs in larger arteries. PDE4D does not show association to small vessel stroke, consistent with it role in atherosclerosis. In summary, atherosclerosis accounts for the majority of all strokes, particularly carotid and cardiogenic stroke, two subphenotypes that show the strongest association to the *PDE4D* gene.

REPRESENTATIVE TARGET POPULATION

An individual at risk for stroke is an individual who has at least one risk factor, such as previous stroke or TIA, an at-risk haplotype in one or more stroke risk genes, an at-risk haplotype for the PDE4D gene; a polymorphism in a PDE4D gene; disregulation of PDE4D isoform expression; diabetes; hypertension; hypercholesterolemia; elevated lp(a); obesity; a past or current smoker; an elevated inflammatory marker (*e.g.*, a marker such as C-reactive protein (CRP), serum amyloid A, fibrinogen, tissue necrosis factor-alpha, a soluble vascular cell adhesion molecule (sVCAM), a soluble intervascular adhesion molecule (sICAM), E-selectin, matrix metalloprotease type-1, matrix metalloprotease type-2, matrix metalloprotease type-3, and matrix metalloprotease type-9); increased LDL cholesterol and/or decreased HDL cholesterol; and/or at least one previous myocardial infarction, concurrent MI, acute coronary syndrome, stable angina, atherosclerosis, carotid stenosis, peripheral vascular occlusive disease, or requires treatment for restoration of coronary artery blood flow (*e.g.*, angioplasty, stent, coronary artery bypass graft).

An individual who has a protective haplotype is one who is less likely to have a stroke. In another embodiment of the invention, an individual who is at risk for stroke is an individual who has a polymorphism in a PDE4D gene, in which the presence of the polymorphism is indicative of a susceptibility to stroke. An individual who has a protective haplotype and less likely to have a stroke is an individual who has a polymorphism in a PDE4D gene such as the A allele at

nucleotide position 142780 relative to SEQ ID NO: 1, in which the presence of the polymorphism is indicative of a protection from stroke. The term "gene," as used herein, refers to not only the sequence of nucleic acids encoding a polypeptide, but also the promoter regions, transcription enhancement elements, splice donor/acceptor sites, splice enhancer and silencer sequences and other regulators of splicing, and other non-transcribed nucleic acid elements. Representative polymorphisms include those presented in Table 11, below.

In one embodiment of the invention, an individual who is at risk for stroke is an individual who has an at-risk haplotype in PDE4D, as described herein, particularly but not limited to ischemic stroke. Increased risk for the two major subtypes of ischemic stroke, carotid and cardiogenic stroke, can be assessed by screening for at-risk haplotype that comprises SNP5PDM361194, SNP5PDM368135, SNP5PDM370640, SNP5PDM379372 and SNP5PDM408531 at the 5' UTR of PDE4D7. Results reported herein indicate that PDE4D is involved in pathogenesis of stroke through atherosclerosis. The major pathological process for carotid stroke and cardiogenic stroke is atherosclerosis. Thus, an individual who is at-risk for atherosclerosis, peripheral arterial occlusive disease, or myocardial infarction can also benefit from the teachings of the invention.

ASSESSMENT FOR AT-RISK AND PROTECTIVE HAPLOTYPES

A "haplotype," as described herein, refers to a combination of genetic markers ("alleles"), such as those set forth in Tables 1, 2C, 4A and 4B. In a certain embodiment, the haplotype can comprise one or more alleles, two or more alleles, three or more alleles, four or more alleles, or five or more alleles. The genetic markers are particular "alleles" at "polymorphic sites" associated with PDE4D. A nucleotide position at which more than one sequence is possible in a population (either a natural population or a synthetic population, *e.g.*, a library of synthetic molecules), is referred to herein as a "polymorphic site". Where a polymorphic site is a single nucleotide in length, the site is referred to as a single nucleotide polymorphism ("SNP"). For example, if at a particular chromosomal location, one member of a population has an adenine and another member of the population has a thymine at the same position, then this position is a polymorphic site, and, more

specifically, the polymorphic site is a SNP. Polymorphic sites can allow for differences in sequences based on substitutions, insertions or deletions. Each version of the sequence with respect to the polymorphic site is referred to herein as an "allele" of the polymorphic site. Thus, in the previous example, the SNP allows for both an adenine allele and a thymine allele.

Typically, a reference sequence is referred to for a particular sequence. Alleles that differ from the reference are referred to as "variant" alleles. For example, the reference PDE4D sequence is described herein by SEQ ID NO: 1. The term, "variant PDE4D", as used herein, refers to a sequence that differs from SEQ ID NO: 1, but is otherwise substantially similar. The genetic markers that make up the haplotypes described herein are PDE4D variants.

Additional variants can include changes that affect a polypeptide, *e.g.*, the PDE4D polypeptide. These sequence differences, when compared to a reference nucleotide sequence, can include the insertion or deletion of a single nucleotide, or of more than one nucleotide, resulting in a frame shift; the change of at least one nucleotide, resulting in a change in the encoded amino acid; the change of at least one nucleotide, resulting in the generation of a premature stop codon; the deletion of several nucleotides, resulting in a deletion of one or more amino acids encoded by the nucleotides; the insertion of one or several nucleotides, such as by unequal recombination or gene conversion, resulting in an interruption of the coding sequence of a reading frame; duplication of all or a part of a sequence; transposition; or a rearrangement of a nucleotide sequence, as described in detail above. Such sequence changes alter the polypeptide encoded by a PDE4D nucleic acid. For example, if the change in the nucleic acid sequence causes a frame shift, the frame shift can result in a change in the encoded amino acids, and/or can result in the generation of a premature stop codon, causing generation of a truncated polypeptide. Alternatively, a polymorphism associated with stroke or a susceptibility to stroke can be a synonymous change in one or more nucleotides (*i.e.*, a change that does not result in a change in the amino acid sequence). Such a polymorphism can, for example, alter splice sites, affect the stability or transport of mRNA, or otherwise affect the transcription or translation of the polypeptide. The polypeptide encoded by the reference nucleotide sequence is the "reference" polypeptide with a particular

reference amino acid sequence, and polypeptides encoded by variant alleles are referred to as "variant" polypeptides with variant amino acid sequences.

Haplotypes are a combination of genetic markers, *e.g.*, particular alleles at polymorphic sites. The haplotypes described herein, *e.g.*, having markers such as those shown in Table 3, Table 4A and 4B, are found more frequently in individuals with stroke than in individuals without stroke. Therefore, these haplotypes have predictive value for detecting stroke or a susceptibility to stroke in an individual. The haplotypes described herein are a combination of various genetic markers, *e.g.*, SNPs and microsatellites. Therefore, detecting haplotypes can be accomplished by methods known in the art for detecting sequences at polymorphic sites, such as the methods described above.

In certain methods described herein, an individual who is at risk for stroke is an individual in whom an at-risk haplotype is identified. In one embodiment, the at-risk haplotype is one that confers a significant risk of stroke. In one embodiment, significance associated with a haplotype is measured by an odds ratio. In a further embodiment, the significance is measured by a percentage. In one embodiment, a significant risk is measured as an odds ratio of at least about 1.2, including but not limited to: 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8 and 1.9. In a further embodiment, an odds ratio of at least 1.2 is significant. In a further embodiment, an odds ratio of at least about 1.5 is significant. In a further embodiment, a significant increase in risk is at least about 1.7 is significant. In a further embodiment, a significant increase in risk is at least about 20%, including but not limited to about 25%, 30%, 35%, 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95% and 98%. In a further embodiment, a significant increase in risk is at least about 50%. It is understood however, that identifying whether a risk is medically significant may also depend on a variety of factors, including the specific disease, the haplotype, and often, environmental factors.

An at-risk haplotype in, or comprising portions of, the PDE4D gene, is one where the haplotype is more frequently present in an individual at risk for stroke (affected), compared to the frequency of its presence in a healthy individual (control), and wherein the presence of the haplotype is indicative of stroke or susceptibility to stroke. A protective haplotype in or comprising portions of the

PDE4D gene is one where the haplotype is more frequently present in an individual where the haplotype is protective against being affected by stroke compared to the frequency of its presence in an individual with stroke. The presence of the haplotype is indicative of a protection from stroke or protection from susceptibility to stroke as described above.

Standard techniques for genotyping for the presence of SNPs and/or microsatellite markers can be used, such as fluorescent-based techniques (Chen, *et al.*, *Genome Res. 9*, 492 (1999)), PCR, LCR, Nested PCR and other techniques for nucleic acid amplification. In one embodiment, the method comprises assessing in an individual the presence or frequency of SNPs and/or microsatellites in, comprising portions of, the PDE4Dgene, wherein an excess or higher frequency of the SNPs and/or microsatellites compared to a healthy control individual is indicative that the individual has stroke, or is susceptible to stroke. See, for example, Table 1, Table 2C, Table 2D, Table 3, Table 4A and 4B (below) for SNPs and markers that can form haplotypes that can be used as screening tools. These markers and SNPs can be identified in at-risk haploptypes. For example, an at-risk haplotype can include microsatellite markers and/or SNPs such as those set forth in Table 2C, Table 4B and 4B. The presence of the haplotype is indicative of stroke, or a susceptibility to stroke, and therefore is indicative of an individual who falls within a target population for the treatment methods described herein.

Haplotype analysis first involves defining a candidate susceptibility locus using LOD scores. The defined regions are then ultra-fine mapped with microsatellite markers with an average spacing between markers of less than 100kb. All usable microsatellite markers that found in public databases and mapped within that region can be used. In addition, microsatellite markers identified within the deCODE genetics sequence assembly of the human genome can be used. The frequencies of haplotypes in the patient and the control groups using an expectation-maximization algorithm can be estimated (Dempster A. *et al.*, 1977. *J. R. Stat. Soc. B*, 39:1-389). An implementation of this algorithm that can handle missing genotypes and uncertainty with the phase can be used. Under the null hypothesis, the patients and the controls are assumed to have identical frequencies. Using a likelihood approach, an alternative hypothesis where a candidate at-risk-haplotype,

which can include the markers described herein, is allowed to have a higher frequency in patients than controls, while the ratios of the frequencies of other haplotypes are assumed to be the same in both groups is tested. Likelihoods are maximized separately under both hypotheses and a corresponding 1-df likelihood ratio statistics is used to evaluate the statistic significance.

To look for at-risk-haplotypes in the 1-lod drop or protective haplotypes, for example, association of all possible combinations of genotyped markers is studied, provided those markers span a practical region. The combined patient and control groups can be randomly divided into two sets, equal in size to the original group of patients and controls. The haplotype analysis is then repeated and the most significant p-value registered is determined. This randomization scheme can be repeated, for example, over 100 times to construct an empirical distribution of p-values.

In one embodiment, the at-risk haplotype is characterized by the presence of the polymorphism(s) represented by one or a combination of single nucleotide polymorphisms at nucleic acid positions 1425923, 1415979, 1414804, 1371388, 1307403 and 1257206, relative to SEQ ID NO: 1. In another embodiment, a diagnostic method for susceptibility to stroke can comprise determining the presence of at-risk haplotype represented by one or a combination of single nucleotide polymorphisms and microsatellite markers at nucleic acid positions 263539, 252772, 189780, 175259, 171240, 136550 and 120628, relative to SEQ ID NO: 1. In another embodiment, the at-risk haplotype is characterized by the following SNPs: SNP5PDM361194, SNP5PDM368135, SNP5PDM370640, SNP5PDM379372, and SNP5PDM408531. In one embodiment, the protective haplotype comprises the A allele of SNP45 at position 142780 relative to SEQ ID NO: 1. This haplotype is particularly useful for assessing susceptibility to the two major subtypes of ischemic stroke, carotid and cardiogenic stroke. In another embodiment, an at-risk haplotype, particularly for carotid and cardiogenic stroke, is characterized by use of microsatellite marker AC008818-1 to define the presence of an at-risk allele.

NUCLEIC ACID THERAPEUTIC AGENTS

In another embodiment, a nucleic acid of the invention; a nucleic acid complementary to a nucleic acid of the invention; or a portion of such a nucleic acid (*e.g.*, an oligonucleotide as described below); or a nucleic acid encoding a PDE4D polypeptide, can be used in "antisense" therapy, in which a nucleic acid (*e.g.*, an oligonucleotide) which specifically hybridizes to the mRNA and/or genomic DNA of a nucleic acid is administered or generated *in situ*. The antisense nucleic acid that specifically hybridizes to the mRNA and/or DNA inhibits expression of the polypeptide encoded by that mRNA and/or DNA, *e.g.*, by inhibiting translation and/or transcription. Binding of the antisense nucleic acid can be by conventional base pair complementarity, or, for example, in the case of binding to DNA duplexes, through specific interaction in the major groove of the double helix.

An antisense construct can be delivered, for example, as an expression plasmid as described above. When the plasmid is transcribed in the cell, it produces RNA that is complementary to a portion of the mRNA and/or DNA that encodes a PDE4D polypeptide. Alternatively, the antisense construct can be an oligonucleotide probe that is generated *ex vivo* and introduced into cells; it then inhibits expression by hybridizing with the mRNA and/or genomic DNA of the polypeptide. In one embodiment, the oligonucleotide probes are modified oligonucleotides that are resistant to endogenous nucleases, *e.g.*, exonucleases and/or endonucleases, thereby rendering them stable *in vivo*. Exemplary nucleic acid molecules for use as antisense oligonucleotides are phosphoramidate, phosphothioate and methylphosphonate analogs of DNA (see also U.S. Patent Nos. 5,176,996, 5,264,564 and 5,256,775). Additionally, general approaches to constructing oligomers useful in antisense therapy are also described, for example, by Van der Krol *et al.* (*Biotechniques* 6:958-976 (1988)); and Stein *et al.* (*Cancer Res.* 48:2659-2668 (1988)). With respect to antisense DNA, oligodeoxyribonucleotides derived from the translation initiation site are preferred.

To perform antisense therapy, oligonucleotides (mRNA, cDNA or DNA) are designed that are complementary to mRNA encoding the polypeptide. The antisense oligonucleotides bind to mRNA transcripts and prevent translation. Absolute complementarity, although preferred, is not required. A sequence "complementary"

to a portion of an RNA, as referred to herein, indicates that a sequence has sufficient complementarity to be able to hybridize with the RNA, forming a stable duplex; in the case of double-stranded antisense nucleic acids, a single strand of the duplex DNA may thus be tested, or triplex formation may be assayed. The ability to hybridize will depend on both the degree of complementarity and the length of the antisense nucleic acid, as described in detail above. Generally, the longer the hybridizing nucleic acid, the more base mismatches with an RNA it may contain and still form a stable duplex (or triplex, as the case may be). One skilled in the art can ascertain a tolerable degree of mismatch by use of standard procedures.

The oligonucleotides used in antisense therapy can be DNA, RNA, or chimeric mixtures or derivatives or modified versions thereof, single-stranded or double-stranded. The oligonucleotides can be modified at the base moiety, sugar moiety, or phosphate backbone, for example, to improve stability of the molecule, hybridization, etc. The oligonucleotides can include other appended groups such as peptides (*e.g.* for targeting host cell receptors *in vivo*), or agents facilitating transport across the cell membrane (see, *e.g.*, Letsinger *et al.*, *Proc. Natl. Acad. Sci. USA* 86:6553-6556 (1989); Lemaitre *et al.*, *Proc. Natl. Acad. Sci. USA* 84:648-652 (1987); PCT International Publication No. WO 88/09810) or the blood-brain barrier (see, *e.g.*, PCT International Publication No. WO 89/10134), or hybridization-triggered cleavage agents (see, *e.g.*, Krol *et al.*, *BioTechniques* 6:958-976 (1988)) or intercalating agents. (See, *e.g.*, Zon, *Pharm.Res.* 5: 539-549 (1988)). To this end, the oligonucleotide may be conjugated to another molecule (*e.g.*, a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent).

The antisense molecules are delivered to cells that express a PDE4D polypeptide *in vivo*. A number of methods can be used for delivering antisense DNA or RNA to cells; *e.g.*, antisense molecules can be injected directly into the tissue site, or modified antisense molecules, designed to target the desired cells (*e.g.*, antisense linked to peptides or antibodies that specifically bind receptors or antigens expressed on the target cell surface) can be administered systematically. Alternatively, in a another embodiment, a recombinant DNA construct is utilized in which the antisense oligonucleotide is placed under the control of a strong promoter (*e.g.*, pol III or pol

II). The use of such a construct to transfect target cells in the patient results in the transcription of sufficient amounts of single stranded RNAs that will form complementary base pairs with the endogenous transcripts and thereby prevent translation of the mRNA. For example, a vector can be introduced *in vivo* such that it is taken up by a cell and directs the transcription of an antisense RNA. Such a vector can remain episomal or become chromosomally integrated, as long as it can be transcribed to produce the desired antisense RNA. Such vectors can be constructed by recombinant DNA technology methods standard in the art and described above. For example, a plasmid, cosmid, YAC or viral vector can be used to prepare the recombinant DNA construct that can be introduced directly into the tissue site. Alternatively, viral vectors can be used which selectively infect the desired tissue, in which case administration may be accomplished by another route (*e.g.*, systemically).

In another embodiment of the invention, small double-stranded interfering RNA (RNA interference (RNAi)) can be used. RNAi is a post-transcription process, in which double-stranded RNA is introduced, and sequence-specific gene silencing results, though catalytic degradation of the targeted mRNA. See, *e.g.*, Elbashir, S.M. *et al.*, *Nature 411*:494-498 (2001); Lee, N.S., *Nature Biotech. 19*:500-505 (2002); Lee, S-K. *et al.*, *Nature Medicine 8(7)*:681-686 (2002); the entire teachings of these references are incorporated herein by reference.

Endogenous expression of a gene product can also be reduced by inactivating or "knocking out" the gene or its promoter using targeted homologous recombination (*e.g.*, see Smithies *et al.*, *Nature* 317:230-234 (1985); Thomas & Capecchi, *Cell* 51:503-512 (1987); Thompson *et al.*, *Cell* 5:313-321 (1989)). For example, an altered, non-functional gene (or a completely unrelated DNA sequence) flanked by DNA homologous to the endogenous gene (either the coding regions or regulatory regions of the gene) can be used, with or without a selectable marker and/or a negative selectable marker, to transfect cells that express the gene *in vivo*. Insertion of the DNA construct, via targeted homologous recombination, results in inactivation of the gene. The recombinant DNA constructs can be directly administered or targeted to the required site *in vivo* using appropriate vectors, as described above. Alternatively, expression of non-altered genes can be increased using a similar

method: targeted homologous recombination can be used to insert a DNA construct comprising a non-altered functional gene, or the complement thereof, or a portion thereof, in place of an gene in the cell, as described above. In another embodiment, targeted homologous recombination can be used to insert a DNA construct comprising a nucleic acid that encodes a polypeptide variant that differs from that present in the cell.

Alternatively, endogenous expression of a gene product can be reduced by targeting deoxyribonucleotide sequences complementary to the regulatory region (*i.e.*, the promoter and/or enhancers) to form triple helical structures that prevent transcription of the gene in target cells in the body. (See generally, Helene, C., *Anticancer Drug Des.*, 6(6):569-84 (1991); Helene, C. *et al.*, *Ann. N.Y. Acad. Sci.* 660:27-36 (1992); and Maher, L. J., *Bioassays* 14(12):807-15 (1992)). Likewise, the antisense constructs described herein, by antagonizing the normal biological activity of the gene product, can be used in the manipulation of tissue, *e.g.*, tissue differentiation, both *in vivo* and *for ex vivo* tissue cultures. Furthermore, the anti-sense techniques (*e.g.*, microinjection of antisense molecules, or transfection with plasmids whose transcripts are anti-sense with regard to a nucleic acid RNA or nucleic acid sequence) can be used to investigate the role of one or more members of the PDE4D pathway in the development of disease-related conditions. Such techniques can be utilized in cell culture, but can also be used in the creation of transgenic animals.

The therapeutic agents as described herein can be delivered in a composition, as described above, or alone. They can be administered systemically, or can be targeted to a particular tissue. The therapeutic agents can be produced by a variety of means, including chemical synthesis; recombinant production; *in vivo* production (*e.g.*, a transgenic animal, such as U.S. Patent No. 4,873,316 to Meade *et al.*), for example, and can be isolated using standard means such as those described herein. In addition, a combination of any of the above methods of treatment (*e.g.*, administration of non-altered polypeptide in conjunction with antisense therapy targeting altered mRNA; administration of a first splicing variant in conjunction with antisense therapy targeting a second splicing variant) can also be used.

The invention additionally pertains to use of such therapeutic agents, as described herein, for the manufacture of a medicament for the treatment of stroke, TIA, MI, and/or atherosclerosis, e.g., using the methods described herein.

MONITORING PROGRESS OF TREATMENT

The current invention also pertains to methods of monitoring the effectiveness of treatment on the regulation of expression (*e.g.*, relative or absolute expression) of one or more PDE4D isoforms at the RNA or protein level or its enzymatic activity. PDE4D message or protein or enzymatic activity can be measured in a sample of peripheral blood or cells derived therefrom. An assessment of the levels of expression or activity can be made before and during treatment with PDE4D therapeutic agents.

For example, in one embodiment of the invention, an individual who is a member of the target population can be assessed for response to treatment with a PDE4D inhibitor, by examining cAMP levels or PDE4D enzymatic activity or absolute and/or relative levels of PDE4D protein or mRNA isoforms in peripheral blood in general or specific cell subfractions or combination of cell subfractions. In addition, variation such as haplotypes or mutations within or near (within 100 to 200kb) of the PDE4D gene may be used to identify individuals who are at higher risk for stroke or TIA to increase the power and efficiency of clinical trials for pharmaceutical agents to prevent or treat first or subsequent stroke. The haplotypes and other variations may be used to exclude or fractionate patients in a clinical trial who are likely to have non-cAMP or non-PDE4D pathway involvement in their stroke risk in order to enrich patients who have other pathways involved and boost the power and sensitivity of the clinical trial. Such variation may be used as a pharmacogenomic test to guide selection of pharmaceutical agents for individuals.

NUCLEIC ACIDS OF THE INVENTION

Nucleic Acids, Portions and Variants

All nucleotide positions are relative to SEQ ID NO: 1. The nucleic acids, polypeptides and antibodies described herein can be used in methods of diagnosis of susceptibility to stroke, as well as in kits useful for diagnosis of a susceptibility to

stroke. In addition, the invention pertains to isolated nucleic acid molecules comprising a human PDE4D nucleic acid. The term, "PDE4D nucleic acid," as used herein, refers to an isolated nucleic acid molecule encoding PDE4D polypeptide. The PDE4D nucleic acid molecules of the present invention can be RNA, for example, mRNA, or DNA, such as cDNA and genomic DNA. DNA molecules can be double-stranded or single-stranded; single stranded RNA or DNA can be either the coding, or sense strand or the non-coding, or antisense strand. The nucleic acid molecule can include all or a portion of the coding sequence of the gene or nucleic acid and can further comprise additional non-coding sequences such as introns and non-coding 3' and 5' sequences (including regulatory sequences, for example, as well as promoters, transcription enhancement elements, splice donor/acceptor sites, etc.). For example, a PDE4D nucleic acid can comprise the nucleic acid of SEQ ID NO: 1 which may optionally comprise at least one polymorphism as shown in Tables 11 and 12, the complement thereof, or to a portion or fragment of such an isolated nucleic acid molecule (*e.g.*, cDNA or the nucleic acid) that encodes PDE4D polypeptide.

Additionally, the nucleic acid molecules of the invention can be fused to a marker sequence, for example, a sequence that encodes a polypeptide to assist in isolation or purification of the polypeptide. Such sequences include, but are not limited to, those that encode a glutathione-S-transferase (GST) fusion protein and those that encode a hemagglutinin A (HA) polypeptide marker from influenza.

An "isolated" nucleic acid molecule, as used herein, is one that is separated from nucleic acids that normally flank the gene or nucleotide sequence (as in genomic sequences) and/or has been completely or partially purified from other transcribed sequences (*e.g.,* as in an RNA library). For example, an isolated nucleic acid of the invention may be substantially isolated with respect to the complex cellular milieu in which it naturally occurs, or culture medium when produced by recombinant techniques, or chemical precursors or other chemicals when chemically synthesized. In some instances, the isolated material will form part of a composition (for example, a crude extract containing other substances), buffer system or reagent mix. In other circumstances, the material may be purified to essential homogeneity, for example as determined by PAGE or column chromatography such as HPLC.

Preferably, an isolated nucleic acid molecule comprises at least about 50, 80 or 90% (on a molar basis) of all macromolecular species present. With regard to genomic DNA, the term "isolated" also can refer to nucleic acid molecules that are separated from the chromosome with which the genomic DNA is naturally associated. For example, the isolated nucleic acid molecule can contain less than about 5 kb, 4 kb, 3 kb, 2 kb, 1 kb, 0.5 kb or 0.1 kb of nucleotides which flank the nucleic acid molecule in the genomic DNA of the cell from which the nucleic acid molecule is derived.

The nucleic acid molecule can be fused to other coding or regulatory sequences and still be considered isolated. Thus, recombinant DNA contained in a vector is included in the definition of "isolated" as used herein. Also, isolated nucleic acid molecules include recombinant DNA molecules in heterologous host cells, as well as partially or substantially purified DNA molecules in solution. "Isolated" nucleic acid molecules also encompass *in vivo* and *in vitro* RNA transcripts of the DNA molecules of the present invention. An isolated nucleic acid molecule or nucleotide sequence can include a nucleic acid molecule or nucleotide sequence that is synthesized chemically or by recombinant means. Therefore, recombinant DNA contained in a vector is included in the definition of "isolated" as used herein. Also, isolated nucleotide sequences include recombinant DNA molecules in heterologous organisms, as well as partially or substantially purified DNA molecules in solution. *In vivo* and *in vitro* RNA transcripts of the DNA molecules of the present invention are also encompassed by "isolated" nucleotide sequences. Such isolated nucleotide sequences are useful in the manufacture of the encoded polypeptide, as probes for isolating homologous sequences (*e.g.*, from other mammalian species), for gene mapping (*e.g.*, by *in situ* hybridization with chromosomes), or for detecting expression of the gene in tissue (*e.g.*, human tissue), such as by Northern blot analysis.

The present invention also pertains to variant nucleic acid molecules which are not necessarily found in nature but which encode a PDE4D polypeptide (*e.g.*, a polypeptide having the amino acid sequence of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14), or another splicing variant of PDE4D polypeptide or polymorphic variant thereof. Thus, for example, DNA molecules which comprise a sequence that is different from the naturally-occurring nucleotide sequence but which, due to the

degeneracy of the genetic code, encode a PDE4D polypeptide of the present invention are also the subject of this invention. The invention also encompasses nucleotide sequences encoding portions (fragments), or encoding variant polypeptides such as analogues or derivatives of the PDE4D polypeptide. Such variants can be naturally-occurring, such as in the case of allelic variation or single nucleotide polymorphisms, or non-naturally-occurring, such as those induced by various mutagens and mutagenic processes. Intended variations include, but are not limited to, addition, deletion and substitution of one or more nucleotides that can result in conservative or non-conservative amino acid changes, including additions and deletions. Preferably the nucleotide (and/or resultant amino acid) changes are silent or conserved; that is, they do not alter the characteristics or activity of the PDE4D polypeptide. In one embodiment, the nucleotide sequences are fragments that comprise one or more polymorphic microsatellite markers. In another embodiment, the nucleotide sequences are fragments that comprise one or more single nucleotide polymorphisms in the PDE4D gene.

Other alterations of the nucleic acid molecules of the invention can include, for example, labeling, methylation, internucleotide modifications such as uncharged linkages (*e.g.*, methyl phosphonates, phosphotriesters, phosphoamidates, carbamates), charged linkages (*e.g.*, phosphorothioates, phosphorodithioates), pendent moieties (*e.g.*, polypeptides), intercalators (*e.g.*, acridine, psoralen), chelators, alkylators, and modified linkages (*e.g.*, alpha anomeric nucleic acids). Also included are synthetic molecules that mimic nucleic acid molecules in the ability to bind to a designated sequence via hydrogen bonding and other chemical interactions. Such molecules include, for example, those in which peptide linkages substitute for phosphate linkages in the backbone of the molecule.

The invention also pertains to nucleic acid molecules that hybridize under high stringency hybridization conditions, such as for selective hybridization, to a nucleotide sequence described herein (*e.g.*, nucleic acid molecules which specifically hybridize to a nucleotide sequence encoding polypeptides described herein, and, optionally, have an activity of the polypeptide). In one embodiment, the invention includes variants described herein which hybridize under high stringency hybridization conditions (*e.g.*, for selective hybridization) to a nucleotide sequence

comprising a nucleotide sequence selected from SEQ ID NO: 1 which may optionally comprise at least one polymorphism as shown in Tables 11 and 12 or the complement thereof. In another embodiment, the invention includes variants described herein which hybridize under high stringency hybridization conditions (*e.g.*, for selective hybridization) to a nucleotide sequence encoding an amino acid sequence selected from SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14 or polymorphic variant thereof. In another embodiment, the protein product of the variant that hybridizes under high stringency conditions has an activity of PDE4D.

Such nucleic acid molecules can be detected and/or isolated by specific hybridization (*e.g.*, under high stringency conditions). "Specific hybridization," as used herein, refers to the ability of a first nucleic acid to hybridize to a second nucleic acid in a manner such that the first nucleic acid does not hybridize to any nucleic acid other than to the second nucleic acid (*e.g.*, when the first nucleic acid has a higher similarity to the second nucleic acid than to any other nucleic acid in a sample wherein the hybridization is to be performed). "Stringency conditions" for hybridization is a term of art which refers to the incubation and wash conditions, *e.g.*, conditions of temperature and buffer concentration, which permit hybridization of a particular nucleic acid to a second nucleic acid; the first nucleic acid may be perfectly (*i.e.*, 100%) complementary to the second, or the first and second may share some degree of complementarity which is less than perfect (*e.g.*, 70%, 75%, 85%, 95%). For example, certain high stringency conditions can be used which distinguish perfectly complementary nucleic acids from those of less complementarity. "High stringency conditions", "moderate stringency conditions" and "low stringency conditions" for nucleic acid hybridizations are explained on pages 2.10.1-2.10.16 and pages 6.3.1-6.3.6 in *Current Protocols in Molecular Biology* (Ausubel, F.M. *et al.*, "*Current Protocols in Molecular Biology*", John Wiley & Sons, (1998), the entire teachings of which are incorporated by reference herein). The exact conditions which determine the stringency of hybridization depend not only on ionic strength (*e.g.*, 0.2XSSC, 0.1XSSC), temperature (*e.g.*, room temperature, 42°C, 68°C) and the concentration of destabilizing agents such as formamide or denaturing agents such as SDS, but also on factors such as the length of the nucleic acid sequence, base composition, percent mismatch between

hybridizing sequences and the frequency of occurrence of subsets of that sequence within other non-identical sequences. Thus, equivalent conditions can be determined by varying one or more of these parameters while maintaining a similar degree of identity or similarity between the two nucleic acid molecules. Typically, conditions are used such that sequences at least about 60%, at least about 70%, at least about 80%, at least about 90% or at least about 95% or more identical to each other remain hybridized to one another. By varying hybridization conditions from a level of stringency at which no hybridization occurs to a level at which hybridization is first observed, conditions which will allow a given sequence to hybridize (*e.g.*, selectively) with the most similar sequences in the sample can be determined.

Exemplary conditions are described in Krause, M.H. and S.A. Aaronson, *Methods in Enzymology, 200*:546-556 (1991). Also, in, Ausubel, *et al.*, "*Current Protocols in Molecular Biology*", John Wiley & Sons, (1998), which describes the determination of washing conditions for moderate or low stringency conditions. Washing is the step in which conditions are usually set so as to determine a minimum level of complementarity of the hybrids. Generally, starting from the lowest temperature at which only homologous hybridization occurs, each °C by which the final wash temperature is reduced (holding SSC concentration constant) allows an increase by 1% in the maximum extent of mismatching among the sequences that hybridize. Generally, doubling the concentration of SSC results in an increase in T_m of ~17°C. Using these guidelines, the washing temperature can be determined empirically for high, moderate or low stringency, depending on the level of mismatch sought.

For example, a low stringency wash can comprise washing in a solution containing 0.2XSSC/0.1% SDS for 10 min at room temperature; a moderate stringency wash can comprise washing in a prewarmed solution (42°C) solution containing 0.2XSSC/0.1% SDS for 15 min at 42°C; and a high stringency wash can comprise washing in prewarmed (68°C) solution containing 0.1XSSC/0.1%SDS for 15 min at 68°C. Furthermore, washes can be performed repeatedly or sequentially to obtain a desired result as known in the art. Equivalent conditions can be determined by varying one or more of the parameters given as an example, as known in the art,

while maintaining a similar degree of identity or similarity between the target nucleic acid molecule and the primer or probe used.

The percent homology or identity of two nucleotide or amino acid sequences can be determined by aligning the sequences for optimal comparison purposes (*e.g.*, gaps can be introduced in the sequence of a first sequence for optimal alignment). The nucleotides or amino acids at corresponding positions are then compared, and the percent identity between the two sequences is a function of the number of identical positions shared by the sequences (*i.e.*, % identity = # of identical positions/total # of positions x 100). When a position in one sequence is occupied by the same nucleotide or amino acid residue as the corresponding position in the other sequence, then the molecules are homologous at that position. As used herein, nucleic acid or amino acid "homology" is equivalent to nucleic acid or amino acid "identity". In certain embodiments, the length of a sequence aligned for comparison purposes is at least 30%, for example, at least 40%, in certain embodiments at least 60%, and in other embodiments at least 70%, 80%, 90% or 95% of the length of the reference sequence. The actual comparison of the two sequences can be accomplished by well-known methods, for example, using a mathematical algorithm. One, non-limiting example of such a mathematical algorithm is described in Karlin *et al.*, *Proc. Natl. Acad. Sci. USA* 90:5873-5877 (1993). Such an algorithm is incorporated into the NBLAST and XBLAST programs (version 2.0) as described in Altschul *et al.*, *Nucleic Acids Res.* 25:389-3402 (1997). When utilizing BLAST and Gapped BLAST programs, the default parameters of the respective programs (*e.g.*, NBLAST) can be used. In one embodiment, parameters for sequence comparison can be set at score=100, wordlength=12, or can be varied (*e.g.*, W=5 or W=20).

Another preferred non-limiting example of a mathematical algorithm utilized for the comparison of sequences is the algorithm of Myers and Miller, CABIOS (1989). Such an algorithm is incorporated into the ALIGN program (version 2.0) which is part of the GCG sequence alignment software package. When utilizing the ALIGN program for comparing amino acid sequences, a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4 can be used. Additional algorithms for sequence analysis are known in the art and include ADVANCE and

ADAM as described in Torellis and Robotti (1994) *Comput. Appl. Biosci., 10*:3-5; and FASTA described in Pearson and Lipman (1988) *PNAS, 85*:2444-8.

In another embodiment, the percent identity between two amino acid sequences can be accomplished using the GAP program in the GCG software package (Accelrys, Cambridge, UK) using either a Blossom 63 matrix or a PAM250 matrix, and a gap weight of 12, 10, 8, 6, or 4 and a length weight of 2, 3, or 4. In yet another embodiment, the percent identity between two nucleic acid sequences can be accomplished using the GAP program in the GCG software package, using a gap weight of 50 and a length weight of 3.

The present invention also provides isolated nucleic acid molecules that contain a fragment or portion that hybridizes under highly stringent conditions to a nucleotide sequence comprising a nucleotide sequence selected from SEQ ID NO: 1 which may optionally comprise at least one polymorphism as shown in Tables 11 and 12 and the complement thereof, and also provides isolated nucleic acid molecules that contain a fragment or portion that hybridizes under highly stringent conditions to a nucleotide sequence encoding an amino acid sequence selected from SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or polymorphic variant thereof. The nucleic acid fragments of the invention are at least about 15, preferably at least about 18, 20, 23 or 25 nucleotides, and can be 30, 40, 50, 100, 200 or more nucleotides in length. Longer fragments, for example, 30 or more nucleotides in length, which encode antigenic polypeptides described herein are particularly useful, such as for the generation of antibodies as described below.

Probes and Primers

In a related aspect, the nucleic acid fragments of the invention are used as probes or primers in assays such as those described herein. "Probes" or “primers” are oligonucleotides that hybridize in a base-specific manner to a complementary strand of nucleic acid molecules. By “base specific manner” is meant that the two sequences must have a degree of nucleotide complementarity sufficient for the primer or probe to hybridize. Accordingly, the primer or probe sequence is not required to be perfectly complementary to the sequence of the template. Non-complementary bases or modified bases can be interspersed into the primer or probe,

provided that base substitutions do not inhibit hybridization. The nucleic acid template may also include "non-specific priming sequences" or "nonspecific sequences" to which the primer or probe has varying degrees of complementarities. Such probes and primers include polypeptide nucleic acids, as described in Nielsen *et al.*, *Science, 254*, 1497-1500 (1991).

A probe or primer comprises a region of nucleic acid that hybridizes to at least about 15, for example about 20-25, and in certain embodiments about 40, 50 or 75, consecutive nucleotides of a nucleic acid of the invention, such as a nucleic acid comprising a contiguous nucleic acid sequence of SEQ ID NO: 1 or the complement of SEQ ID NO: 1, or a nucleic acid sequence encoding an amino acid sequence of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or polymorphic variant thereof. In certain embodiments, a probe or primer comprises 100 or fewer nucleotides, in certain embodiments, from 6 to 50 nucleotides, for example, from 12 to 30 nucleotides. In other embodiments, the probe or primer is at least 70% identical to the contiguous nucleic acid sequence or to the complement of the contiguous nucleotide sequence, for example, at least 80% identical, in certain embodiments at least 90% identical, and in other embodiments at least 95% identical, or even capable of selectively hybridizing to the contiguous nucleic acid sequence or to the complement of the contiguous nucleotide sequence. Often, the probe or primer further comprises a label, *e.g.*, radioisotope, fluorescent compound, enzyme, or enzyme co-factor.

The nucleic acid molecules of the invention such as those described above can be identified and isolated using standard molecular biology techniques and the sequence information provided herein. For example, nucleic acid molecules can be amplified and isolated by the polymerase chain reaction using synthetic oligonucleotide primers designed based on one or more of the sequences provided in SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12, and/or the complement thereof, or designed based on nucleotides based on sequences encoding one or more of the amino acid sequences provided herein. See generally *PCR Technology: Principles and Applications for DNA Amplification* (ed. H.A. Erlich, Freeman Press, NY, NY, 1992); *PCR Protocols: A Guide to Methods and Applications* (Eds. Innis, *et al.*, Academic Press, San Diego,

CA, 1990); Mattila *et al.*, *Nucleic Acids Res.*, *19*:4967 (1991); Eckert *et al.*, *PCR Methods and Applications*, *1*:17 (1991); PCR (eds. McPherson *et al.*, IRL Press, Oxford); and U.S. Patent 4,683,202. The nucleic acid molecules can be amplified using cDNA, mRNA or genomic DNA as a template, cloned into an appropriate vector and characterized by DNA sequence analysis.

Other suitable amplification methods include the ligase chain reaction (LCR) (see Wu and Wallace, *Genomics*, *4*:560 (1989), Landegren *et al.*, *Science*, *241*:1077 (1988), transcription amplification (Kwoh *et al.*, *Proc. Natl. Acad. Sci. USA*, *86*:1173 (1989)), and self-sustained sequence replication (Guatelli *et al.*, *Proc. Nat. Acad. Sci. USA*, *87*:1874 (1990)) and nucleic acid based sequence amplification (NASBA). The latter two amplification methods involve isothermal reactions based on isothermal transcription, which produce both single stranded RNA (ssRNA) and double stranded DNA (dsDNA) as the amplification products in a ratio of about 30 or 100 to 1, respectively.

The amplified DNA can be labeled (*e.g.*, with radiolabel or other reporter molecule) and used as a probe for screening a cDNA library derived from human cells, mRNA in zap express, ZIPLOX or other suitable vector. Corresponding clones can be isolated, DNA can obtained following *in vivo* excision, and the cloned insert can be sequenced in either or both orientations by art recognized methods to identify the correct reading frame encoding a polypeptide of the appropriate molecular weight. For example, the direct analysis of the nucleotide sequence of nucleic acid molecules of the present invention can be accomplished using well-known methods that are commercially available. See, for example, Sambrook *et al.*, *Molecular Cloning, A Laboratory Manual* (2nd Ed., CSHP, New York 1989); Zyskind *et al.*, *Recombinant DNA Laboratory Manual*, (Acad. Press, 1988)). Using these or similar methods, the polypeptide and the DNA encoding the polypeptide can be isolated, sequenced and further characterized.

Antisense nucleic acid molecules of the invention can be designed using the nucleotide sequences of SEQ ID NO: 1 and/or the complement of SEQ ID NO: 1, and/or a portion of SEQ ID NO: 1 or the complement of SEQ ID NO: 1 and/or a sequence encoding the amino acid sequences or SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 and/or 14, or encoding a portion of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 and/or

14, (wherein any one of these may optionally comprise at least one polymorphism as shown in Tables 11 and 12) and constructed using chemical synthesis and enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid molecule (*e.g.*, an antisense oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the antisense and sense nucleic acids, *e.g.*, phosphorothioate derivatives and acridine substituted nucleotides can be used. Alternatively, the antisense nucleic acid molecule can be produced biologically using an expression vector into which a nucleic acid molecule has been subcloned in an antisense orientation (*i.e.*, RNA transcribed from the inserted nucleic acid molecule will be of an antisense orientation to a target nucleic acid of interest).

In general, the isolated nucleic acid sequences of the invention can be used as molecular weight markers on Southern gels, and as chromosome markers that are labeled to map related gene positions. The nucleic acid sequences can also be used to compare with endogenous DNA sequences in patients to identify genetic disorders (*e.g.*, a predisposition for or susceptibility to stroke), and as probes, such as to hybridize and discover related DNA sequences or to subtract out known sequences from a sample. The nucleic acid sequences can further be used to derive primers for genetic fingerprinting, to raise anti-polypeptide antibodies using DNA immunization techniques, and as an antigen to raise anti-DNA antibodies or elicit immune responses. Portions or fragments of the nucleotide sequences identified herein (and the corresponding complete gene sequences) can be used in numerous ways as polynucleotide reagents. For example, these sequences can be used to: (i) map their respective genes on a chromosome; and, thus, locate gene regions associated with genetic disease; (ii) identify an individual from a minute biological sample (tissue typing); and (iii) aid in forensic identification of a biological sample. Additionally, the nucleotide sequences of the invention can be used to identify and express recombinant polypeptides for analysis, characterization or therapeutic use, or as markers for tissues in which the corresponding polypeptide is expressed, either constitutively, during tissue differentiation, or in diseased states. The nucleic acid sequences can additionally be used as reagents in the screening and/or diagnostic

assays described herein, and can also be included as components of kits (*e.g.*, reagent kits) for use in the screening and/or diagnostic assays described herein.

Vectors

Another aspect of the invention pertains to nucleic acid constructs containing a nucleic acid molecule selected from the group consisting of SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12 and the complement thereof (or a portion thereof). Yet another aspect of the invention pertains to nucleic acid constructs containing a nucleic acid molecule encoding the amino acid sequence of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14 or polymorphic variant thereof. The constructs comprise a vector (*e.g.*, an expression vector) into which a sequence of the invention has been inserted in a sense or antisense orientation. As used herein, the term "vector" refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid", which refers to a circular double stranded DNA loop into which additional DNA segments can be ligated. Another type of vector is a viral vector, wherein additional DNA segments can be ligated into the viral genome. Certain vectors are capable of autonomous replication in a host cell into which they are introduced (*e.g.*, bacterial vectors having a bacterial origin of replication and episomal mammalian vectors). Other vectors (*e.g.*, non-episomal mammalian vectors) are integrated into the genome of a host cell upon introduction into the host cell, and thereby are replicated along with the host genome. Moreover, certain vectors, expression vectors, are capable of directing the expression of genes to which they are operably linked. In general, expression vectors of utility in recombinant DNA techniques are often in the form of plasmids. However, the invention is intended to include such other forms of expression vectors, such as viral vectors (*e.g.*, replication defective retroviruses, adenoviruses and adeno-associated viruses) that serve equivalent functions.

Preferred recombinant expression vectors of the invention comprise a nucleic acid molecule of the invention in a form suitable for expression of the nucleic acid molecule in a host cell. This means that the recombinant expression vectors include one or more regulatory sequences, selected on the basis of the host cells to be used

for expression, which is operably linked to the nucleic acid sequence to be expressed. Within a recombinant expression vector, "operably or operatively linked" is intended to mean that the nucleotide sequence of interest is linked to the regulatory sequence(s) in a manner which allows for expression of the nucleotide sequence (*e.g.*, in an *in vitro* transcription/translation system or in a host cell when the vector is introduced into the host cell). The term "regulatory sequence" is intended to include promoters, enhancers and other expression control elements (*e.g.*, polyadenylation signals). Such regulatory sequences are described, for example, in Goeddel, *Gene Expression Technology: Methods in Enzymology 185*, Academic Press, San Diego, CA (1990). Regulatory sequences include those which direct constitutive expression of a nucleotide sequence in many types of host cell and those which direct expression of the nucleotide sequence only in certain host cells (*e.g.*, tissue-specific regulatory sequences). It will be appreciated by those skilled in the art that the design of the expression vector can depend on such factors as the choice of the host cell to be transformed and the level of expression of polypeptide desired. The expression vectors of the invention can be introduced into host cells to thereby produce polypeptides, including fusion polypeptides, encoded by nucleic acid molecules as described herein.

The recombinant expression vectors of the invention can be designed for expression of a polypeptide of the invention in prokaryotic or eukaryotic cells, *e.g.*, bacterial cells such as *E. coli*, insect cells (using baculovirus expression vectors), yeast cells or mammalian cells. Suitable host cells are discussed further in Goeddel, *supra*. Alternatively, the recombinant expression vector can be transcribed and translated *in vitro*, for example using T7 promoter regulatory sequences and T7 polymerase.

Another aspect of the invention pertains to host cells into which a recombinant expression vector of the invention has been introduced. The terms "host cell" and "recombinant host cell" are used interchangeably herein. It is understood that such terms refer not only to the particular subject cell but also to the progeny or potential progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such

progeny may not, in fact, be identical to the parent cell, but are still included within the scope of the term as used herein.

A host cell can be any prokaryotic or eukaryotic cell. For example, a nucleic acid molecule of the invention can be expressed in bacterial cells (*e.g., E. coli*), insect cells, yeast or mammalian cells (such as Chinese hamster ovary cells (CHO) or COS cells). Other suitable host cells are known to those skilled in the art.

Vector DNA can be introduced into prokaryotic or eukaryotic cells via conventional transformation or transfection techniques. As used herein, the terms "transformation" and "transfection" are intended to refer to a variety of art-recognized techniques for introducing a foreign nucleic acid molecule (*e.g.,* DNA) into a host cell, including calcium phosphate or calcium chloride co-precipitation, DEAE-dextran-mediated transfection, lipofection, or electroporation. Suitable methods for transforming or transfecting host cells can be found in Sambrook, *et al.,* (*supra*), and other laboratory manuals.

For stable transfection of mammalian cells, it is known that, depending upon the expression vector and transfection technique used, only a small fraction of cells may integrate the foreign DNA into their genome. In order to identify and select these integrants, a gene that encodes a selectable marker (*e.g.,* for resistance to antibiotics) is generally introduced into the host cells along with the gene of interest. Preferred selectable markers include those that confer resistance to drugs, such as G418, hygromycin and methotrexate. Nucleic acid molecules encoding a selectable marker can be introduced into a host cell on the same vector as the nucleic acid molecule of the invention or can be introduced on a separate vector. Cells stably transfected with the introduced nucleic acid molecule can be identified by drug selection (*e.g.,* cells that have incorporated the selectable marker gene will survive, while the other cells die).

A host cell of the invention, such as a prokaryotic or eukaryotic host cell in culture, can be used to produce (*i.e.,* express) a polypeptide of the invention. Accordingly, the invention further provides methods for producing a polypeptide using the host cells of the invention. In one embodiment, the method comprises culturing the host cell of invention (into which a recombinant expression vector encoding a polypeptide of the invention has been introduced) in a suitable medium

such that the polypeptide is produced. In another embodiment, the method further comprises isolating the polypeptide from the medium or the host cell.

The host cells of the invention can also be used to produce nonhuman transgenic animals. For example, in one embodiment, a host cell of the invention is a fertilized oocyte or an embryonic stem cell into which a nucleic acid molecule of the invention has been introduced (*e.g.,* an exogenous PDE4D gene, or an exogenous nucleic acid encoding PDE4D polypeptide). Such host cells can then be used to create non-human transgenic animals in which exogenous nucleotide sequences have been introduced into the genome or homologous recombinant animals in which endogenous nucleotide sequences have been altered. Such animals are useful for studying the function and/or activity of the nucleotide sequence and polypeptide encoded by the sequence and for identifying and/or evaluating modulators of their activity. As used herein, a "transgenic animal" is a non-human animal, preferably a mammal, more preferably a rodent such as a rat or mouse, in which one or more of the cells of the animal include a transgene. Other examples of transgenic animals include non-human primates, sheep, dogs, cows, goats, chickens and amphibians. A transgene is exogenous DNA which is integrated into the genome of a cell from which a transgenic animal develops and which remains in the genome of the mature animal, thereby directing the expression of an encoded gene product in one or more cell types or tissues of the transgenic animal. As used herein, an "homologous recombinant animal" is a non-human animal, preferably a mammal, more preferably a mouse, in which an endogenous gene has been altered by homologous recombination between the endogenous gene and an exogenous DNA molecule introduced into a cell of the animal, *e.g.,* an embryonic cell of the animal, prior to development of the animal.

Methods for generating transgenic animals via embryo manipulation and microinjection, particularly animals such as mice, have become conventional in the art and are described, for example, in U.S. Patent Nos. 4,736,866 and 4,870,009, U.S. Patent No. 4,873,191 and in Hogan, *Manipulating the Mouse Embryo* (Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986). Methods for constructing homologous recombination vectors and homologous recombinant animals are described further in Bradley (1991) *Current Opinion in Bio/Technology,*

2:823-829 and in PCT Publication Nos. WO 90/11354, WO 91/01140, WO 92/0968, and WO 93/04169. Clones of the non-human transgenic animals described herein can also be produced according to the methods described in Wilmut *et al.* (1997) *Nature, 385*:810-813 and PCT Publication Nos. WO 97/07668 and WO 97/07669.

POLYPEPTIDES OF THE INVENTION

The present invention also pertains to isolated polypeptides encoded by PDE4D ("PDE4D polypeptides") and fragments and variants thereof, as well as polypeptides encoded by nucleotide sequences described herein (*e.g.*, other splicing variants). The term "polypeptide" refers to a polymer of amino acids, and not to a specific length; thus, peptides, oligopeptides and proteins are included within the definition of a polypeptide. As used herein, a polypeptide is said to be "isolated" or "purified" when it is substantially free of cellular material when it is isolated from recombinant and non-recombinant cells, or free of chemical precursors or other chemicals when it is chemically synthesized. A polypeptide, however, can be joined to another polypeptide with which it is not normally associated in a cell (*e.g.*, in a "fusion protein") and still be "isolated" or "purified."

The polypeptides of the invention can be purified to homogeneity. It is understood, however, that preparations in which the polypeptide is not purified to homogeneity are useful. The critical feature is that the preparation allows for the desired function of the polypeptide, even in the presence of considerable amounts of other components. Thus, the invention encompasses various degrees of purity. In one embodiment, the language "substantially free of cellular material" includes preparations of the polypeptide having less than about 30% (by dry weight) other proteins (*i.e.*, contaminating protein), less than about 20% other proteins, less than about 10% other proteins, or less than about 5% other proteins.

When a polypeptide is recombinantly produced, it can also be substantially free of culture medium, *i.e.*, culture medium represents less than about 20%, less than about 10%, or less than about 5% of the volume of the polypeptide preparation. The language "substantially free of chemical precursors or other chemicals" includes preparations of the polypeptide in which it is separated from chemical precursors or other chemicals that are involved in its synthesis. In one embodiment, the language

"substantially free of chemical precursors or other chemicals" includes preparations of the polypeptide having less than about 30% (by dry weight) chemical precursors or other chemicals, less than about 20% chemical precursors or other chemicals, less than about 10% chemical precursors or other chemicals, or less than about 5% chemical precursors or other chemicals.

In one embodiment, a polypeptide of the invention comprises an amino acid sequence encoded by a nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12 and complements and portions thereof, *e.g.,* SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or a portion or polymorphic variant thereof. However, the polypeptides of the invention also encompass fragment and sequence variants. Variants include a substantially homologous polypeptide encoded by the same genetic locus in an organism, *i.e.,* an allelic variant, as well as other splicing variants. Variants also encompass polypeptides derived from other genetic loci in an organism, but having substantial homology to a polypeptide encoded by a nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12 and complements and portions thereof, or having substantial homology to a polypeptide encoded by a nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of nucleotide sequences encoding SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or polymorphic variants thereof. Variants also include polypeptides substantially homologous or identical to these polypeptides but derived from another organism, *i.e.,* an ortholog. Variants also include polypeptides that are substantially homologous or identical to these polypeptides that are produced by chemical synthesis. Variants also include polypeptides that are substantially homologous or identical to these polypeptides that are produced by recombinant methods.

As used herein, two polypeptides (or a region of the polypeptides) are substantially homologous or identical when the amino acid sequences are at least about 45-55%, in certain embodiments at least about 70-75%, and in other embodiments at least about 80-85%, and in others greater than about 90% or more homologous or identical. A substantially homologous amino acid sequence,

according to the present invention, will be encoded by a nucleic acid molecule hybridizing to SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12, or portion thereof, under stringent conditions as more particularly described above, or will be encoded by a nucleic acid molecule hybridizing to a nucleic acid sequence encoding SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, portion thereof or polymorphic variant thereof, under stringent conditions as more particularly described thereof.

The invention also encompasses polypeptides having a lower degree of identity but having sufficient similarity so as to perform one or more of the same functions performed by a polypeptide encoded by a nucleic acid molecule of the invention. Similarity is determined by conserved amino acid substitution. Such substitutions are those that substitute a given amino acid in a polypeptide by another amino acid of like characteristics. Conservative substitutions are likely to be phenotypically silent. Typically seen as conservative substitutions are the replacements, one for another, among the aliphatic amino acids Ala, Val, Leu and Ile; interchange of the hydroxyl residues Ser and Thr, exchange of the acidic residues Asp and Glu, substitution between the amide residues Asn and Gln, exchange of the basic residues Lys and Arg and replacements among the aromatic residues Phe and Tyr. Guidance concerning which amino acid changes are likely to be phenotypically silent are found in Bowie *et al.*, *Science 247*:1306-1310 (1990).

A variant polypeptide can differ in amino acid sequence by one or more substitutions, deletions, insertions, inversions, fusions, and truncations or a combination of any of these. Further, variant polypeptides can be fully functional or can lack function in one or more activities. Fully functional variants typically contain only conservative variation or variation in non-critical residues or in non-critical regions. Functional variants can also contain substitution of similar amino acids that result in no change or an insignificant change in function. Alternatively, such substitutions may positively or negatively affect function to some degree. Non-functional variants typically contain one or more non-conservative amino acid substitutions, deletions, insertions, inversions, or truncation or a substitution, insertion, inversion, or deletion in a critical residue or critical region.

Amino acids that are essential for function can be identified by methods known in the art, such as site-directed mutagenesis or alanine-scanning mutagenesis (Cunningham *et al.*, *Science, 244*:1081-1085 (1989)). The latter procedure introduces single alanine mutations at every residue in the molecule. The resulting mutant molecules are then tested for biological activity *in vitro*, or *in vitro* proliferative activity. Sites that are critical for polypeptide activity can also be determined by structural analysis such as crystallization, nuclear magnetic resonance or photoaffinity labeling (Smith *et al.*, *J. Mol. Biol., 224*:899-904 (1992); de Vos *et al.*, *Science, 255*:306-312 (1992)).

The invention also includes polypeptide fragments of the polypeptides of the invention. Fragments can be derived from a polypeptide encoded by a nucleic acid molecule comprising SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12 or a portion thereof and the complements thereof (*e.g.*, SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or other splicing variants). However, the invention also encompasses fragments of the variants of the polypeptides described herein. As used herein, a fragment comprises at least 6 contiguous amino acids. Useful fragments include those that retain one or more of the biological activities of the polypeptide as well as fragments that can be used as an immunogen to generate polypeptide-specific antibodies.

Biologically active fragments (peptides which are, for example, 6, 9, 12, 15, 16, 20, 30, 35, 36, 37, 38, 39, 40, 50, 100 or more amino acids in length) can comprise a domain, segment, or motif that has been identified by analysis of the polypeptide sequence using well-known methods, *e.g.*, signal peptides, extracellular domains, one or more transmembrane segments or loops, ligand binding regions, zinc finger domains, DNA binding domains, acylation sites, glycosylation sites, or phosphorylation sites.

Fragments can be discrete (not fused to other amino acids or polypeptides) or can be within a larger polypeptide. Further, several fragments can be comprised within a single larger polypeptide. In one embodiment a fragment designed for expression in a host can have heterologous pre- and pro-polypeptide regions fused to the amino terminus of the polypeptide fragment and an additional region fused to the carboxyl terminus of the fragment.

The invention thus provides chimeric or fusion polypeptides. These comprise a polypeptide of the invention operatively linked to a heterologous protein or polypeptide having an amino acid sequence not substantially homologous to the polypeptide. "Operatively linked" indicates that the polypeptide and the heterologous protein are fused in-frame. The heterologous protein can be fused to the N-terminus or C-terminus of the polypeptide. In one embodiment the fusion polypeptide does not affect function of the polypeptide *per se*. For example, the fusion polypeptide can be a GST-fusion polypeptide in which the polypeptide sequences are fused to the C-terminus of the GST sequences. Other types of fusion polypeptides include, but are not limited to, enzymatic fusion polypeptides, for example β-galactosidase fusions, yeast two-hybrid GAL fusions, poly-His fusions and Ig fusions. Such fusion polypeptides, particularly poly-His fusions, can facilitate the purification of recombinant polypeptide. In certain host cells (*e.g.*, mammalian host cells), expression and/or secretion of a polypeptide can be increased by using a heterologous signal sequence. Therefore, in another embodiment, the fusion polypeptide contains a heterologous signal sequence at its N-terminus.

EP-A-O 464 533 discloses fusion proteins comprising various portions of immunoglobulin constant regions. The Fc is useful in therapy and diagnosis and thus results, for example, in improved pharmacokinetic properties (EP-A 0232 262). In drug discovery, for example, human proteins have been fused with Fc portions for the purpose of high-throughput screening assays to identify antagonists. Bennett *et al.*, *Journal of Molecular Recognition, 8*:52-58 (1995) and Johanson *et al.*, *The Journal of Biological Chemistry, 270*,16:9459-9471 (1995). Thus, this invention also encompasses soluble fusion polypeptides containing a polypeptide of the invention and various portions of the constant regions of heavy or light chains of immunoglobulins of various subclasses (IgG, IgM, IgA, IgE).

A chimeric or fusion polypeptide can be produced by standard recombinant DNA techniques. For example, DNA fragments coding for the different polypeptide sequences are ligated together in-frame in accordance with conventional techniques. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification of nucleic acid fragments can be carried out using anchor primers which give rise to

complementary overhangs between two consecutive nucleic acid fragments which can subsequently be annealed and re-amplified to generate a chimeric nucleic acid sequence (see Ausubel *et al.*, *Current Protocols in Molecular Biology*, 1992). Moreover, many expression vectors are commercially available that already encode a fusion moiety (*e.g.*, a GST protein). A nucleic acid molecule encoding a polypeptide of the invention can be cloned into such an expression vector such that the fusion moiety is linked in-frame to the polypeptide.

The isolated polypeptide can be purified from cells that naturally express it, purified from cells that have been altered to express it (recombinant), or synthesized using known protein synthesis methods. In one embodiment, the polypeptide is produced by recombinant DNA techniques. For example, a nucleic acid molecule encoding the polypeptide is cloned into an expression vector, the expression vector introduced into a host cell and the polypeptide expressed in the host cell. The polypeptide can then be isolated from the cells by an appropriate purification scheme using standard protein purification techniques.

In general, polypeptides of the present invention can be used as a molecular weight marker on SDS-PAGE gels or on molecular sieve gel filtration columns using art-recognized methods. The polypeptides of the present invention can be used to raise antibodies or to elicit an immune response. The polypeptides can also be used as a reagent, *e.g.*, a labeled reagent, in assays to quantitatively determine levels of the polypeptide or a molecule to which it binds (*e.g.*, a receptor or a ligand) in biological fluids. The polypeptides can also be used as markers for cells or tissues in which the corresponding polypeptide is preferentially expressed, either constitutively, during tissue differentiation, or in a diseased state. The polypeptides can be used to isolate a corresponding binding agent, *e.g.*, receptor or ligand, such as, for example, in an interaction trap assay, and to screen for peptide or small molecule antagonists or agonists of the binding interaction.

ANTIBODIES OF THE INVENTION

Polyclonal and/or monoclonal antibodies that specifically bind one form of the gene product but not to the other form of the gene product are also provided. Antibodies are also provided that bind a portion of either the variant or the reference

gene product that contains the polymorphic site or sites. The invention provides antibodies to the polypeptides and polypeptide fragments of the invention, *e.g.*, having an amino acid sequence encoded by SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or a portion thereof, or having an amino acid sequence encoded by a nucleic acid molecule comprising all or a portion of SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12 (*e.g.*, SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or another splicing variant or portion thereof). The term "antibody" as used herein refers to immunoglobulin molecules and immunologically active portions of immunoglobulin molecules, *i.e.*, molecules that contain an antigen binding site that specifically binds an antigen. A molecule that specifically binds to a polypeptide of the invention is a molecule that binds to that polypeptide or a fragment thereof, but does not substantially bind other molecules in a sample, *e.g.*, a biological sample, which naturally contains the polypeptide. Examples of immunologically active portions of immunoglobulin molecules include F(ab) and $F(ab')_2$ fragments which can be generated by treating the antibody with an enzyme such as pepsin. The invention provides polyclonal and monoclonal antibodies that bind to a polypeptide of the invention. The term "monoclonal antibody" or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one species of an antigen binding site capable of immunoreacting with a particular epitope of a polypeptide of the invention. A monoclonal antibody composition thus typically displays a single binding affinity for a particular polypeptide of the invention with which it immunoreacts.

Polyclonal antibodies can be prepared as described above by immunizing a suitable subject with a desired immunogen, *e.g.*, polypeptide of the invention or fragment thereof. The antibody titer in the immunized subject can be monitored over time by standard techniques, such as with an enzyme linked immunosorbent assay (ELISA) using immobilized polypeptide. If desired, the antibody molecules directed against the polypeptide can be isolated from the mammal (*e.g.*, from the blood) and further purified by well-known techniques, such as protein A chromatography to obtain the IgG fraction. At an appropriate time after immunization, *e.g.*, when the antibody titers are highest, antibody-producing cells can be obtained from the subject

and used to prepare monoclonal antibodies by standard techniques, such as the hybridoma technique originally described by Kohler and Milstein (1975) *Nature, 256*:495-497, the human B cell hybridoma technique (Kozbor *et al.* (1983) *Immunol. Today, 4*:72), the EBV-hybridoma technique (Cole *et al.* (1985), *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, Inc., pp. 77-96) or trioma techniques. The technology for producing hybridomas is well known (see generally *Current Protocols in Immunology* (1994) Coligan *et al.* (eds.) John Wiley & Sons, Inc., New York, NY). Briefly, an immortal cell line (typically a myeloma) is fused to lymphocytes (typically splenocytes) from a mammal immunized with an immunogen as described above, and the culture supernatants of the resulting hybridoma cells are screened to identify a hybridoma producing a monoclonal antibody that binds a polypeptide of the invention.

Any of the many well known protocols used for fusing lymphocytes and immortalized cell lines can be applied for the purpose of generating a monoclonal antibody to a polypeptide of the invention (see, *e.g., Current Protocols in Immunology, supra*; Galfre *et al.* (1977) *Nature, 266*:55052; R.H. Kenneth, in *Monoclonal Antibodies: A New Dimension In Biological Analyses*, Plenum Publishing Corp., New York, New York (1980); and Lerner (1981) *Yale J. Biol. Med., 54*:387-402. Moreover, the ordinarily skilled worker will appreciate that there are many variations of such methods that also would be useful.

Alternative to preparing monoclonal antibody-secreting hybridomas, a monoclonal antibody to a polypeptide of the invention can be identified and isolated by screening a recombinant combinatorial immunoglobulin library (*e.g.*, an antibody phage display library) with the polypeptide to thereby isolate immunoglobulin library members that bind the polypeptide. Kits for generating and screening phage display libraries are commercially available (*e.g.*, the Pharmacia *Recombinant Phage Antibody System*, Catalog No. 27-9400-01; and the Stratagene *Surf*ZAP™ Phage Display Kit, Catalog No. 240612). Additionally, examples of methods and reagents particularly amenable for use in generating and screening antibody display library can be found in, for example, U.S. Patent No. 5,223,409; PCT Publication No. WO 92/18619; PCT Publication No. WO 91/17271; PCT Publication No. WO 92/20791; PCT Publication No. WO 92/15679; PCT Publication No. WO 93/01288; PCT

Publication No. WO 92/01047; PCT Publication No. WO 92/09690; PCT Publication No. WO 90/02809; Fuchs *et al.* (1991) *Bio/Technology, 9*:1370-1372; Hay *et al.* (1992) *Hum. Antibod. Hybridomas, 3*:81-85; Huse *et al.* (1989) *Science, 246*:1275-1281; Griffiths *et al.* (1993) *EMBO J., 12*:725-734.

Additionally, recombinant antibodies, such as chimeric and humanized monoclonal antibodies, comprising both human and non-human portions, which can be made using standard recombinant DNA techniques, are within the scope of the invention. Such chimeric and humanized monoclonal antibodies can be produced by recombinant DNA techniques known in the art.

In general, antibodies of the invention (*e.g.*, a monoclonal antibody) can be used to isolate a polypeptide of the invention by standard techniques, such as affinity chromatography or immunoprecipitation. A polypeptide-specific antibody can facilitate the purification of natural polypeptide from cells and of recombinantly produced polypeptide expressed in host cells. Moreover, an antibody specific for a polypeptide of the invention can be used to detect the polypeptide (*e.g.*, in a cellular lysate, cell supernatant, or tissue sample) in order to evaluate the abundance and pattern of expression of the polypeptide. Antibodies can be used diagnostically to monitor protein levels in tissue as part of a clinical testing procedure, *e.g.*, to, for example, determine the efficacy of a given treatment regimen. Coupling the antibody to a detectable substance can facilitate detection. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. Examples of suitable enzymes include horseradish peroxidase, alkaline phosphatase, β-galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include 125I, 131I, 35S or 3H.

DIAGNOSTIC ASSAYS

The nucleic acids, probes, primers, polypeptides and antibodies described herein can be used in methods of diagnosis of stroke or diagnosis of a susceptibility to stroke or to a disease or condition associated with an stroke gene, such as PDE4D, as well as in kits useful for diagnosis of stroke or a susceptibility to stroke or to a disease or condition associated with PDE4D. In one embodiment, the kit useful for diagnosis of stroke or susceptibility to stroke, or to a disease or condition associated with PDE4D comprises primers as described herein, wherein the primers contain one or more of the SNPs identified herein. In parallel, definition of stroke risk associated with PDE4D/cAMP pathway is useful and novel to define subgroups of individuals who would be best treated by pharmaceutical agents acting on PDE4D and/ cAMP pathways (and vice versa).

In one embodiment of the invention, diagnosis of stroke or susceptibility to stroke (or diagnosis of or susceptibility to a disease or condition associated with PDE4D) is made by detecting a polymorphism in a PDE4D nucleic acid as described herein. The polymorphism can be an alteration in a PDE4D nucleic acid, such as the insertion or deletion of a single nucleotide, or of more than one nucleotide, resulting in a frame shift alteration; the change of at least one nucleotide, resulting in a change in the encoded amino acid; the change of at least one nucleotide, resulting in the generation of a premature stop codon; the deletion of several nucleotides, resulting in a deletion of one or more amino acids encoded by the nucleotides; the insertion of one or several nucleotides, such as by unequal recombination or gene conversion, resulting in an interruption of the coding sequence of the gene or nucleic acid; duplication of all or a part of the gene or nucleic acid; transposition of all or a part of the gene or nucleic acid; or rearrangement of all or a part of the gene or nucleic acid. More than one such alteration may be present in a single gene or nucleic acid. Such sequence changes cause an alteration in the polypeptide encoded by a PDE4D nucleic acid. For example, if the alteration is a frame shift alteration, the frame shift can result in a change in the encoded amino acids, and/or can result in the generation of a premature stop codon, causing generation of a truncated polypeptide. Alternatively, a polymorphism associated with a disease or condition associated with a PDE4D nucleic acid or a susceptibility to a disease or condition associated with a

PDE4D nucleic acid can be a synonymous alteration in one or more nucleotides (*i.e.*, an alteration that does not result in a change in the polypeptide encoded by a PDE4D nucleic acid). For diagnostic applications, there may be polymorphisms informative for prediction of disease risk that are in linkage disequilibrium with the functional polymorphism. Such a polymorphism may alter splicing sites, affect the stability or transport of mRNA, or otherwise affect the transcription or translation of the nucleic acid. A PDE4D nucleic acid that has any of the alteration described above is referred to herein as an "altered nucleic acid."

In a first method of diagnosing stroke or a susceptibility to stroke, hybridization methods, such as Southern analysis, Northern analysis, or *in situ* hybridizations, can be used (see *Current Protocols in Molecular Biology*, Ausubel, F. *et al.*, eds., John Wiley & Sons, including all supplements through 1999). For example, a biological sample from a test subject (a "test sample") of genomic DNA, RNA, or cDNA, is obtained from an individual suspected of having, being susceptible to or predisposed for, or carrying a defect for, a susceptibility to a disease or condition associated with a PDE4D nucleic acid (the "test individual"). The individual can be an adult, child, or fetus. The test sample can be from any source which contains genomic DNA, such as a blood sample, sample of amniotic fluid, sample of cerebrospinal fluid, or tissue sample from skin, muscle, buccal or conjunctival mucosa, placenta, gastrointestinal tract or other organs. A test sample of DNA from fetal cells or tissue can be obtained by appropriate methods, such as by amniocentesis or chorionic villus sampling. The DNA, RNA, or cDNA sample is then examined to determine whether a polymorphism in a stroke nucleic acid is present, and/or to determine which splicing variant(s) encoded by the PDE4D is present. The presence of the polymorphism or splicing variant(s) can be indicated by hybridization of the nucleic acid in the genomic DNA, RNA, or cDNA to a nucleic acid probe. A "nucleic acid probe," as used herein, can be a DNA probe or an RNA probe; the nucleic acid probe can contain at least one polymorphism in a PDE4D nucleic acid or contains a nucleic acid encoding a particular splicing variant of a PDE4D nucleic acid. The probe can be any of the nucleic acid molecules described above (*e.g.*, the nucleic acid, a fragment, a vector comprising the nucleic acid, a probe or primer, etc.).

To diagnose a susceptibility to stroke, a hybridization sample is formed by contacting the test sample containing PDE4D, with at least one nucleic acid probe. A preferred probe for detecting mRNA or genomic DNA is a labeled nucleic acid probe capable of hybridizing to mRNA or genomic DNA sequences described herein. The nucleic acid probe can be, for example, a full-length nucleic acid molecule, or a portion thereof, such as an oligonucleotide of at least 15, 30, 50, 100, 250 or 500 nucleotides in length and sufficient to specifically hybridize under stringent conditions to appropriate mRNA or genomic DNA. For example, the nucleic acid probe can be all or a portion of SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12, or the complement thereof, or a portion thereof; or can be a nucleic acid encoding a portion of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14. Other suitable probes for use in the diagnostic assays of the invention are described above (see *e.g.*, probes and primers discussed under the heading, "Nucleic Acids of the Invention").

The hybridization sample is maintained under conditions that are sufficient to allow specific hybridization of the nucleic acid probe to PDE4D. "Specific hybridization", as used herein, indicates exact hybridization (*e.g.*, with no mismatches). Specific hybridization can be performed under high stringency conditions or moderate stringency conditions, for example, as described above. In a particularly preferred embodiment, the hybridization conditions for specific hybridization are high stringency.

Specific hybridization, if present, is then detected using standard methods. If specific hybridization occurs between the nucleic acid probe and PDE4D in the test sample, then PDE4D has the polymorphism, or is the splicing variant, that is present in the nucleic acid probe. More than one nucleic acid probe can also be used concurrently in this method. In one embodiment, specific hybridization of at least one of the nucleic acid probes is indicative of a polymorphism in PDE4D, or of the presence of a particular splicing variant encoding PDE4D and is therefore diagnostic for a susceptibility to stroke.

In Northern analysis (see Current Protocols in Molecular Biology, Ausubel, F. *et al.*, eds., John Wiley & Sons, *supra*) the hybridization methods described above are used to identify the presence of a polymorphism or a particular splicing variant,

associated with a susceptibility to stroke. For Northern analysis, a test sample of RNA is obtained from the individual by appropriate means. Specific hybridization of a nucleic acid probe, as described above, to RNA from the individual is indicative of a polymorphism in PDE4D, or of the presence of a particular splicing variant encoded by PDE4D, and is therefore diagnostic for a susceptibility to stroke.

For representative examples of use of nucleic acid probes, see, for example, U.S. Patents No. 5,288,611 and 4,851,330.

Alternatively, a peptide nucleic acid (PNA) probe can be used instead of a nucleic acid probe in the hybridization methods described above. PNA is a DNA mimic having a peptide-like, inorganic backbone, such as N-(2-aminoethyl)glycine units, with an organic base (A, G, C, T or U) attached to the glycine nitrogen via a methylene carbonyl linker (see, for example, Nielsen, P.E. *et al., Bioconjugate Chemistry*, 1994, 5, American Chemical Society, p. 1 (1994). The PNA probe can be designed to specifically hybridize to a gene having a polymorphism associated with a susceptibility to stroke. Hybridization of the PNA probe to PDE4D is diagnostic for a susceptibility to stroke.

In another method of the invention, mutation analysis by restriction digestion can be used to detect a mutant gene, or genes containing a polymorphism(s), if the mutation or polymorphism in the gene results in the creation or elimination of a restriction site. If a restriction site is not naturally created, one can be created by PCR that depends on the polymorphism and allows genotyping. A test sample containing genomic DNA is obtained from the individual. Nucleic acid amplification methods, including but not limited to Polymerase chain reaction (PCR), Transcription Mediated Amplifications (TMA), and Ligase Mediate Amplification (LMA), can be used to amplify PDE4D. The digestion pattern of the relevant DNA fragment indicates the presence or absence of the mutation or polymorphism in PDE4D, and therefore indicates the presence or absence of this susceptibility to stroke. RFLP analysis is conducted as described (see Current Protocols in Molecular Biology, *supra*). Amplification techniques based upon detection of sequence of interest using reverse dot blot technology (linear array or strips) can be used and are described, for example, in U.S. Patent No. 5,468,613.

Sequence analysis can also be used to detect specific polymorphisms in PDE4D. A test sample of DNA or RNA is obtained from the test individual. PCR or other appropriate methods can be used to amplify the gene, and/or its flanking sequences, if desired. The sequence of PDE4D, or a fragment of the gene, or cDNA, or fragment of the cDNA, or mRNA, or fragment of the mRNA, is determined, using standard methods. The sequence of the gene, gene fragment, cDNA, cDNA fragment, mRNA, or mRNA fragment is compared with the known nucleic acid sequence of the gene, cDNA (*e.g.,* SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12, or a nucleic acid sequence encoding SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or a fragment thereof) or mRNA, as appropriate. In one embodiment, the presence of at least one of the polymorphisms in PDE4D indicates that the individual has a susceptibility to stroke.

Allele-specific oligonucleotides can also be used to detect the presence of a polymorphism in PDE4D, through the use of dot-blot hybridization of amplified oligonucleotides with allele-specific oligonucleotide (ASO) probes (see, for example, Saiki, R. *et al.*, (1986), *Nature (London) 324*:163-166). An "allele-specific oligonucleotide" (also referred to herein as an "allele-specific oligonucleotide probe") is an oligonucleotide of approximately 10-50 base pairs, preferably approximately 15-30 base pairs, that specifically hybridizes to PDE4D, and that contains a polymorphism associated with a susceptibility to stroke. An allele-specific oligonucleotide probe that is specific for particular polymorphisms in PDE4D can be prepared, using standard methods (see Current Protocols in Molecular Biology, *supra*). To identify polymorphisms in the gene that are associated with a susceptibility to stroke, a test sample of DNA is obtained from the individual. PCR can be used to amplify all or a fragment of PDE4D, and its flanking sequences. The DNA containing the amplified PDE4D (or fragment of the gene) is dot-blotted, using standard methods (see Current Protocols in Molecular Biology, *supra*), and the blot is contacted with the oligonucleotide probe. The presence of specific hybridization of the probe to the amplified PDE4D is then detected. Specific hybridization of an allele-specific oligonucleotide probe to DNA from the individual is indicative of a polymorphism in PDE4D, and is therefore indicative of a susceptibility to stroke.

The invention further provides allele-specific oligonucleotides that hybridize to the reference or variant allele of a nucleic acid comprising a single nucleotide polymorphism or to the complement thereof. These oligonucleotides can be probes or primers.

An allele-specific primer hybridizes to a site on target DNA overlapping a polymorphism and only primes amplification of an allelic form to which the primer exhibits perfect complementarity. See Gibbs, *Nucleic Acid Res.* 17, 2427-2448 (1989). This primer is used in conjunction with a second primer that hybridizes at a distal site. Amplification proceeds from the two primers, resulting in a detectable product that indicates the particular allelic form is present. A control is usually performed with a second pair of primers, one of which shows a single base mismatch at the polymorphic site and the other of which exhibits perfect complementarity to a distal site. The single-base mismatch prevents amplification and no detectable product is formed. The method works best when the mismatch is included in the 3'-most position of the oligonucleotide aligned with the polymorphism because this position is most destabilizing to elongation from the primer (see, *e.g.*, WO 93/22456).

With the addition of such analogs as locked nucleic acids (LNAs), the size of primers and probes can be reduced to as few as 8 bases. LNAs are a novel class of bicyclic DNA analogs in which the 2' and 4' positions in the furanose ring are joined via an O-methylene (oxy-LNA), S-methylene (thio-LNA), or amino methylene (amino-LNA) moiety. Common to all of these LNA variants is an affinity toward complementary nucleic acids, which is by far the highest reported for a DNA analog. For example, particular all oxy-LNA nonamers have been shown to have melting temperatures of 64°C and 74°C when in complex with complementary DNA or RNA, respectively, as opposed to 28°C for both DNA and RNA for the corresponding DNA nonamer. Substantial increases in T_m are also obtained when LNA monomers are used in combination with standard DNA or RNA monomers. For primers and probes, depending on where the LNA monomers are included (*e.g.*, the 3' end, the 5'end, or in the middle), the T_m could be increased considerably.

In another embodiment, arrays of oligonucleotide probes that are complementary to target nucleic acid sequence segments from an individual, can be

used to identify polymorphisms in PDE4D. For example, in one embodiment, an oligonucleotide linear array can be used. Oligonucleotide arrays typically comprise a plurality of different oligonucleotide probes that are coupled to a surface of a substrate in different known locations. These oligonucleotide arrays, also described as "Genechips.TM.," have been generally described in the art, for example, U.S. Patent No. 5,143,854 and PCT patent publication Nos. WO 90/15070 and 92/10092. These arrays can generally be produced using mechanical synthesis methods or light directed synthesis methods that incorporate a combination of photolithographic methods and solid phase oligonucleotide synthesis methods. See Fodor *et al.*, *Science, 251*:767-777 (1991), Pirrung *et al.*, U.S. Patent No. 5,143,854 (see also PCT Application No. WO 90/15070) and Fodor *et al.*, PCT Publication No. WO 92/10092 and U.S. Patent No. 5,424,186, the entire teachings of each of which are incorporated by reference herein. Techniques for the synthesis of these arrays using mechanical synthesis methods are described in, *e.g.*, U.S. Patent No. 5,384,261, the entire teachings of which are incorporated by reference herein. In another embodiment, linear arrays or microarrays can be utilized.

Once an oligonucleotide array is prepared, a nucleic acid of interest is hybridized with the array and scanned for polymorphisms. Hybridization and scanning are generally carried out by methods described herein and also in, *e.g.*, Published PCT Application Nos. WO 92/10092 and WO 95/11995, and U.S. Patent No. 5,424,186, the entire teachings of which are incorporated by reference herein. In brief, a target nucleic acid sequence that includes one or more previously identified polymorphic markers is amplified by well-known amplification techniques, *e.g.*, PCR. Typically, this involves the use of primer sequences that are complementary to the two strands of the target sequence both upstream and downstream from the polymorphism. Asymmetric PCR techniques may also be used. Amplified target, generally incorporating a label, is then hybridized with the array under appropriate conditions. Upon completion of hybridization and washing of the array, the array is scanned to determine the position on the array to which the target sequence hybridizes. The hybridization data obtained from the scan is typically in the form of fluorescence intensities as a function of location on the array.

Although primarily described in terms of a single detection block, *e.g.,* for detection of a single polymorphism, arrays can include multiple detection blocks, and thus be capable of analyzing multiple, specific polymorphisms. In alternate arrangements, it will generally be understood that detection blocks may be grouped within a single array or in multiple, separate arrays so that varying, optimal conditions may be used during the hybridization of the target to the array. For example, it may often be desirable to provide for the detection of those polymorphisms that fall within G-C rich stretches of a genomic sequence, separately from those falling in A-T rich segments. This allows for the separate optimization of hybridization conditions for each situation.

Additional description of use of oligonucleotide arrays for detection of polymorphisms can be found, for example, in U.S. Patents 5,858,659 and 5,837,832, the entire teachings of which are incorporated by reference herein.

Other methods of nucleic acid analysis can be used to detect polymorphisms in PDE4D or splicing variants encoding by PDE4D. Representative methods include direct manual sequencing (Church and Gilbert, (1988), *Proc. Natl. Acad. Sci. USA 81*:1991-1995; Sanger, F. *et al.* (1977) *Proc. Natl. Acad. Sci. 74*:5463-5467; Beavis *et al.,* U.S. Patent No. 5,288,644); automated fluorescent sequencing; single-stranded conformation polymorphism assays (SSCP); clamped denaturing gel electrophoresis (CDGE); denaturing gradient gel electrophoresis (DGGE) (Sheffield, V.C. *et al.* (19891) *Proc. Natl. Acad. Sci. USA 86*:232-236), mobility shift analysis (Orita, M. *et al.* (1989) *Proc. Natl. Acad. Sci. USA 86*:2766-2770), restriction enzyme analysis (Flavell *et al.* (1978) *Cell 15*:25; Geever, *et al.* (1981) *Proc. Natl. Acad. Sci. USA 78*:5081); heteroduplex analysis; chemical mismatch cleavage (CMC) (Cotton *et al.* (1985) *Proc. Natl. Acad. Sci. USA 85*:4397-4401); RNase protection assays (Myers, R.M. *et al.* (1985) *Science 230*:1242); use of polypeptides which recognize nucleotide mismatches, such as *E. coli* mutS protein, for example.

In one embodiment of the invention, diagnosis of a disease or condition associated with PDE4D (*e.g.*, stroke) or a susceptibility to a disease or condition associated with PDE4D (*e.g.*, stroke) can also be made by expression analysis by quantitative PCR (kinetic thermal cycling). This technique utilizing TaqMan® or Lightcycler® can be used to allow the identification of polymorphisms and whether

a patient is homozygous or heterozygous. The technique can assess the presence of an alteration in the expression or composition of the polypeptide encoded by a PDE4D nucleic acid or splicing variants encoded by a PDE4D nucleic acid. Further, the expression of the variants can be quantified as physically or functionally different.

In another embodiment of the invention, diagnosis of a susceptibility to stroke can also be made by examining expression and/or composition of an PDE4D polypeptide, by a variety of methods, including enzyme linked immunosorbent assays (ELISAs), Western blots, immunoprecipitations and immunofluorescence. A test sample from an individual is assessed for the presence of an alteration in the expression and/or an alteration in composition of the polypeptide encoded by PDE4D, or for the presence of a particular variant (*e.g.*, an isoform) encoded by PDE4D. An alteration in expression of a polypeptide encoded by PDE4D can be, for example, an alteration in the quantitative polypeptide expression (*i.e.*, the amount of polypeptide produced); an alteration in the composition of a polypeptide encoded by PDE4D is an alteration in the qualitative polypeptide expression (*e.g.*, expression of a mutant PDE4D polypeptide or of a different splicing variant or isoform). In one embodiment, detecting a particular splicing variant encoded by that PDE4D, or a particular pattern of splicing variants makes diagnosis of the disease or condition associated with PDE4D or a susceptibility to a disease or condition associated with PDE4D.

Both such alterations (quantitative and qualitative) can also be present. An "alteration" in the polypeptide expression or composition, as used herein, refers to an alteration in expression or composition in a test sample, as compared with the expression or composition of polypeptide by PDE4D in a control sample. A control sample is a sample that corresponds to the test sample (*e.g.*, is from the same type of cells), and is from an individual who is not affected by stroke. An alteration in the expression or composition of the polypeptide in the test sample, as compared with the control sample, is indicative of a susceptibility to stroke. Similarly, the presence of one or more different splicing variants or isoforms in the test sample, or the presence of significantly different amounts of different splicing variants in the test sample, as compared with the control sample, is indicative of a susceptibility to

stroke. Various means of examining expression or composition of the polypeptide encoded by PDE4D can be used, including spectroscopy, colorimetry, electrophoresis, isoelectric focusing, and immunoassays (*e.g.*, David *et al.*, U.S. Patent No. 4,376,110) such as immunoblotting (see also Current Protocols in Molecular Biology, particularly chapter 10). For example, in one embodiment, an antibody capable of binding to the polypeptide (*e.g.*, as described above), preferably an antibody with a detectable label, can be used. Antibodies can be polyclonal, or more preferably, monoclonal. An intact antibody, or a fragment thereof (*e.g.*, Fab or $F(ab')_2$) can be used. The term "labeled", with regard to the probe or antibody, is intended to encompass direct labeling of the probe or antibody by coupling (*i.e.*, physically linking) a detectable substance to the probe or antibody, as well as indirect labeling of the probe or antibody by reactivity with another reagent that is directly labeled. Examples of indirect labeling include detection of a primary antibody using a fluorescently labeled secondary antibody and end-labeling of a DNA probe with biotin such that it can be detected with fluorescently labeled streptavidin.

Western blotting analysis, using an antibody as described above that specifically binds to a polypeptide encoded by a mutant PDE4D, or an antibody that specifically binds to a polypeptide encoded by a non-mutant gene, or an antibody that specifically binds to a particular splicing variant encoded by PDE4D, can be used to identify the presence in a test sample of a particular splicing variant or isoform, or of a polypeptide encoded by a polymorphic or mutant PDE4D, or the absence in a test sample of a particular splicing variant or isoform, or of a polypeptide encoded by a non-polymorphic or non-mutant gene. The presence of a polypeptide encoded by a polymorphic or mutant gene, or the absence of a polypeptide encoded by a non-polymorphic or non-mutant gene, is diagnostic for a susceptibility to stroke, as is the presence (or absence) of particular splicing variants encoded by the PDE4D gene.

In one embodiment of this method, the level or amount of polypeptide encoded by PDE4D in a test sample is compared with the level or amount of the polypeptide encoded by PDE4D in a control sample. A level or amount of the polypeptide in the test sample that is higher or lower than the level or amount of the polypeptide in the control sample, such that the difference is statistically significant,

is indicative of an alteration in the expression of the polypeptide encoded by PDE4D, and is diagnostic for a susceptibility to stroke. Alternatively, the composition of the polypeptide encoded by PDE4D in a test sample is compared with the composition of the polypeptide encoded by PDE4D in a control sample (*e.g.*, the presence of different splicing variants). A difference in the composition of the polypeptide in the test sample, as compared with the composition of the polypeptide in the control sample, is diagnostic for a susceptibility to stroke. In another embodiment, both the level or amount and the composition of the polypeptide can be assessed in the test sample and in the control sample. A difference in the amount or level of the polypeptide in the test sample, compared to the control sample; a difference in composition in the test sample, compared to the control sample; or both a difference in the amount or level, and a difference in the composition, is indicative of a susceptibility to stroke.

In another embodiment, assessment of the splicing variant or isoform(s) of a polypeptide encoded by a polymorphic or mutant PDE4D, can be performed. The assessment can be performed directly (*e.g.*, by examining the polypeptide itself), or indirectly (*e.g.*, by examining the mRNA encoding the polypeptide, such as through mRNA profiling). For example, probes or primers as described herein can be used to determine which splicing variants or isoforms are encoded by PDE4D mRNA, using standard methods.

The presence in a test sample of a particular splicing variant(s) or isoform(s) associated with stroke or risk of stroke, or the absence in a test sample of a particular splicing variant(s) or isoform(s) not associated with stroke or risk of stroke, is diagnostic for a disease or condition associated with a PDE4D gene or a susceptibility to a disease or condition associated with a PDE4D gene. Similarly, the absence in a test sample of a particular splicing variant(s) or isoform(s) associated with stroke or risk of stroke, or the presence in a test sample of a particular splicing variant(s) or isoform(s) not associated with stroke or risk of stroke, is diagnostic for the absence of disease or condition associated with a PDE4D gene or a susceptibility to a disease or condition associated with a PDE4D gene.

In another embodiment, differential expression of isoforms PDE4D7, PDE4D9 and combinations thereof can be assessed and compared to control

individuals. Decreased expression of these isoforms is indicative of susceptibility to stroke, particularly carotid stroke and/or cardiogenic stroke.

The invention further pertains to a method for the diagnosis and identification of susceptibility to stroke in an individual, by identifying an at-risk haplotype in PDE4D. In one embodiment, the at-risk haplotype is a haplotype for which the presence of the haplotype increases the risk of stroke significantly. Although it is to be understood that identifying whether a risk is significant may depend on a variety of factors, including the specific disease, the haplotype, and often, environmental factors, the significance may be measured by an odds ratio or a percentage. In a further embodiment, the significance is measured by a percentage. In one embodiment, a significant risk is measured as an odds ratio of at least about 1.2, including but not limited to: 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8 and 1.9. In a further embodiment, an odds ratio of at least 1.2 is significant. In a further embodiment, an odds ratio of at least about 1.5 is significant. In a further embodiment, a significant increase in risk is at least about 1.7 is significant. In a further embodiment, a significant increase in risk is at least about 20%, including but not limited to about 25%, 30%, 35%, 40%, 45%, 50%, 55%, 60%, 65%, 70%, 75%, 80%, 85%, 90%, 95% and 98%. In a further embodiment, a significant increase in risk is at least about 50%. It is understood however, that identifying whether a risk is medically significant may also depend on a variety of factors, including the specific disease, the haplotype, and often, environmental factors.

The invention also pertains to methods of diagnosing stroke or a susceptibility to stroke in an individual, comprising screening for an at-risk haplotype in the PDE4D nucleic acid that is more frequently present in an individual susceptible to stroke (affected), compared to the frequency of its presence in a healthy individual (control), wherein the presence of the haplotype is indicative of stroke or susceptibility to stroke. Standard techniques for genotyping for the presence of SNPs and/or microsatellite markers that are associated with stroke can be used, such as fluorescent-based techniques (Chen, *et al.*, *Genome Res.* *9*, 492 (1999), PCR, LCR, Nested PCR and other techniques for nucleic acid amplification. In one embodiment, the method comprises assessing in an individual the presence or frequency of SNPs and/or microsatellites in the PDE4D nucleic acid that are

associated with stroke, wherein an excess or higher frequency of the SNPs and/or microsatellites compared to a healthy control individual is indicative that the individual has stroke or is susceptible to stroke.

See Table 2C, Table 3, Table 4A, and 4B for SNPs and markers that comprise haplotypes that can be used as screening tools. See also, Table 5, Table 6, Table 11 and Table 12 that set forth previously known SNP and novel microsatellite markers and their counterpart sequence ID reference numbers. SNPs and markers from these lists represent at-risk haplotypes and can be used to design diagnostic tests for determining a susceptibility to stroke.

Kits (*e.g.*, reagent kits) useful in the methods of diagnosis comprise components useful in any of the methods described herein, including for example, hybridization probes or primers as described herein (*e.g.*, labeled probes or primers), reagents for detection of labeled molecules, restriction enzymes (*e.g.*, for RFLP analysis), allele-specific oligonucleotides, antibodies which bind to altered or to non-altered (native) PDE4D polypeptide, means for amplification of nucleic acids comprising PDE4D, or means for analyzing the nucleic acid sequence of PDE4D or for analyzing the amino acid sequence of an PDE4D polypeptide, etc. In one embodiment, a kit for diagnosing susceptibility to stroke can comprise primers for nucleic acid amplification of a region in the PDE4D gene comprising an at-risk haplotype that is more frequently present in an individual susceptible to stroke. The primers can be designed using portions of the nucleic acids flanking SNPs that are indicative of stroke. In a particularly preferred embodiment, the primers are designed to amplify regions of the PDE4D gene associated with an at-risk haplotype for stroke, shown in Tables 8A and 8B. In another embodiment of the invention, a kit for diagnosing susceptibility to stroke can further comprise probes designed to hybridize to regions of the PDE4D gene associated with an at-risk haplotype for stroke, shown in Table 5 and table 6 and/or generated from SEQ ID Nos: 85-102.

SCREENING ASSAYS AND AGENTS IDENTIFIED THEREBY

The invention provides methods (also referred to herein as "screening assays") for identifying the presence of a nucleotide that hybridizes to a nucleic acid of the invention, as well as for identifying the presence of a polypeptide encoded by

a nucleic acid of the invention. In one embodiment, the presence (or absence) of a nucleic acid molecule of interest (*e.g.*, a nucleic acid that has significant homology with a nucleic acid of the invention) in a sample can be assessed by contacting the sample with a nucleic acid comprising a nucleic acid of the invention (*e.g.*, a nucleic acid having the sequence of SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12, or the complement thereof, or a nucleic acid encoding an amino acid having the sequence of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or a fragment or variant of such nucleic acids), under stringent conditions as described above, and then assessing the sample for the presence (or absence) of hybridization. In another embodiment, high stringency conditions are conditions appropriate for selective hybridization. In another embodiment, a sample containing the nucleic acid molecule of interest is contacted with a nucleic acid containing a contiguous nucleotide sequence (*e.g.*, a primer or a probe as described above) that is at least partially complementary to a part of the nucleic acid molecule of interest (*e.g.*, a PDE4D nucleic acid), and the contacted sample is assessed for the presence or absence of hybridization. In another embodiment, the nucleic acid containing a contiguous nucleotide sequence is completely complementary to a part of the nucleic acid molecule of interest.

In any of these embodiments, all or a portion of the nucleic acid of interest can be subjected to amplification prior to performing the hybridization.

In another embodiment, the presence (or absence) of a polypeptide of interest, such as a polypeptide of the invention or a fragment or variant thereof, in a sample can be assessed by contacting the sample with an antibody that specifically hybridizes to the polypeptide of interest (*e.g.*, an antibody such as those described above), and then assessing the sample for the presence (or absence) of binding of the antibody to the polypeptide of interest.

In another embodiment, the invention provides methods for identifying agents (*e.g.*, fusion proteins, polypeptides, peptidomimetics, prodrugs, receptors, binding agents, antibodies, small molecules or other drugs, or ribozymes) that alter (*e.g.*, increase or decrease) the activity of the polypeptides described herein, or which otherwise interact with the polypeptides herein. For example, such agents can be agents which bind to polypeptides described herein (*e.g.*, PDE4D binding agents);

which have a stimulatory or inhibitory effect on, for example, activity of polypeptides of the invention; or which change (*e.g.*, enhance or inhibit) the ability of the polypeptides of the invention to interact with PDE4D binding agents (*e.g.*, receptors or other binding agents); or which alter posttranslational processing of the PDE4D polypeptide (*e.g.*, agents that alter proteolytic processing to direct the polypeptide from where it is normally synthesized to another location in the cell, such as the cell surface); agents that alter proteolytic processing such that more polypeptide is released from the cell, etc.

In one embodiment, the invention provides assays for screening candidate or test agents that bind to or modulate the activity of polypeptides described herein (or biologically active portion(s) thereof), as well as agents identifiable by the assays. Test agents can be obtained using any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and synthetic library methods using affinity chromatography selection. The biological library approach is limited to polypeptide libraries, while the other four approaches are applicable to polypeptide, non-peptide oligomer or small molecule libraries of compounds (Lam, K.S. (1997) *Anticancer Drug Des.*, *12*:145).

In one embodiment, to identify agents which alter the activity of a PDE4D polypeptide, a cell, cell lysate, or solution containing or expressing a PDE4D polypeptide (*e.g.*, SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or another splicing variant encoded by PDE4D), or a fragment or derivative thereof (as described above), can be contacted with an agent to be tested; alternatively, the polypeptide can be contacted directly with the agent to be tested. The level (amount) of PDE4D activity is assessed (*e.g.*, the level (amount) of PDE4D activity is measured, either directly or indirectly), and is compared with the level of activity in a control (*i.e.*, the level of activity of the PDE4D polypeptide or active fragment or derivative thereof in the absence of the agent to be tested). If the level of the activity in the presence of the agent differs, by an amount that is statistically significant, from the level of the activity in the absence of the agent, then the agent is an agent that alters the activity of PDE4D polypeptide. An increase in the level of PDE4D activity relative to level

of the control, indicates that the agent is an agent that enhances (is an agonist of) PDE4D activity. Similarly, a decrease in the level of PDE4D activity relative to level of the control, indicates that the agent is an agent that inhibits (is an antagonist of) PDE4D activity. In another embodiment, the level of activity of a PDE4D polypeptide or derivative or fragment thereof in the presence of the agent to be tested, is compared with a control level that has previously been established. A level of the activity in the presence of the agent that differs from the control level by an amount that is statistically significant indicates that the agent alters PDE4D activity.

The present invention also relates to an assay for identifying agents which alter the expression of the PDE4D gene (*e.g.*, antisense nucleic acids, fusion proteins, polypeptides, peptidomimetics, prodrugs, receptors, binding agents, antibodies, small molecules or other drugs, or ribozymes) which alter (*e.g.*, increase or decrease) expression (*e.g.*, transcription or translation) of the gene or which otherwise interact with the nucleic acids described herein, as well as agents identifiable by the assays. For example, a solution containing a nucleic acid encoding PDE4D polypeptide (*e.g.*, PDE4D gene) can be contacted with an agent to be tested. The solution can comprise, for example, cells containing the nucleic acid or cell lysate containing the nucleic acid; alternatively, the solution can be another solution that comprises elements necessary for transcription/translation of the nucleic acid. Cells not suspended in solution can also be employed, if desired. The level and/or pattern of PDE4D expression (*e.g.*, the level and/or pattern of mRNA or of protein expressed, such as the level and/or pattern of different splicing variants) is assessed, and is compared with the level and/or pattern of expression in a control (*i.e.*, the level and/or pattern of the PDE4D expression in the absence of the agent to be tested). If the level and/or pattern in the presence of the agent differ, by an amount or in a manner that is statistically significant, from the level and/or pattern in the absence of the agent, then the agent is an agent that alters the expression of PDE4D. Enhancement of PDE4D expression indicates that the agent is an agonist of PDE4D activity. Similarly, inhibition of PDE4D expression indicates that the agent is an antagonist of PDE4D activity. In another embodiment, the level and/or pattern of PDE4D polypeptide(s) (*e.g.*, different splicing variants) in the presence of the agent to be tested, is compared with a control level and/or pattern that have previously been

established. A level and/or pattern in the presence of the agent that differs from the control level and/or pattern by an amount or in a manner that is statistically significant indicates that the agent alters PDE4D expression. In one embodiment, agents that can alter expression levels of isoforms PDE4D7 and/or PDE4D9 can be assessed, preferably to complement the expression levels to approximate the ratios of a healthy individual.

In another embodiment of the invention, agents which alter the expression of the PDE4D gene or which otherwise interact with the nucleic acids described herein, can be identified using a cell, cell lysate, or solution containing a nucleic acid encoding the promoter region of the PDE4D gene operably linked to a reporter gene. After contact with an agent to be tested, the level of expression of the reporter gene (*e.g.*, the level of mRNA or of protein expressed) is assessed, and is compared with the level of expression in a control (*i.e.*, the level of the expression of the reporter gene in the absence of the agent to be tested). If the level in the presence of the agent differs, by an amount or in a manner that is statistically significant, from the level in the absence of the agent, then the agent is an agent that alters the expression of PDE4D, as indicated by its ability to alter expression of a gene that is operably linked to the PDE4D gene promoter. Enhancement of the expression of the reporter indicates that the agent is an agonist of PDE4D activity. Similarly, inhibition of the expression of the reporter indicates that the agent is an antagonist of PDE4D activity. In another embodiment, the level of expression of the reporter in the presence of the agent to be tested, is compared with a control level that has previously been established. A level in the presence of the agent that differs from the control level by an amount or in a manner that is statistically significant indicates that the agent alters PDE4D expression.

Agents which alter the amounts of different splicing variants encoded by PDE4D (*e.g.*, an agent which enhances activity of a first splicing variant, and which inhibits activity of a second splicing variant), as well as agents which are agonists of activity of a first splicing variant and antagonists of activity of a second splicing variant, can easily be identified using these methods described above.

In other embodiments of the invention, assays can be used to assess the impact of a test agent on the activity of a polypeptide in relation to a PDE4D binding

agent. For example, a cell that expresses a compound that interacts with PDE4D (herein referred to as a "PDE4D binding agent", which can be a polypeptide or other molecule that interacts with PDE4D, such as a receptor) is contacted with PDE4D in the presence of a test agent, and the ability of the test agent to alter the interaction between PDE4D and the PDE4D binding agent is determined. Alternatively, a cell lysate or a solution containing the PDE4D binding agent, can be used. An agent which binds to PDE4D or the PDE4D binding agent can alter the interaction by interfering with, or enhancing the ability of PDE4D to bind to, associate with, or otherwise interact with the PDE4D binding agent. Determining the ability of the test agent to bind to PDE4D or an PDE4D binding agent can be accomplished, for example, by coupling the test agent with a radioisotope or enzymatic label such that binding of the test agent to the polypeptide can be determined by detecting the labeled with ^{125}I, ^{35}S, ^{14}C or ^{3}H, either directly or indirectly, and the radioisotope detected by direct counting of radioemmission or by scintillation counting. Alternatively, test agents can be enzymatically labeled with, for example, horseradish peroxidase, alkaline phosphatase, or luciferase, and the enzymatic label detected by determination of conversion of an appropriate substrate to product. It is also within the scope of this invention to determine the ability of a test agent to interact with the polypeptide without the labeling of any of the interactants. For example, a microphysiometer can be used to detect the interaction of a test agent with PDE4D or a PDE4D binding agent without the labeling of either the test agent, PDE4D, or the PDE4D binding agent. McConnell, H.M. *et al.* (1992) *Science, 257*:1906-1912. As used herein, a "microphysiometer" (*e.g.,* Cytosensor™) is an analytical instrument that measures the rate at which a cell acidifies its environment using a light-addressable potentiometric sensor (LAPS). Changes in this acidification rate can be used as an indicator of the interaction between ligand and polypeptide. See the Examples Section for a discussion of known PDE4D binding partners. Thus, these receptors can be used to screen for compounds that are PDE4D receptor agonists for use in treating stroke or PDE4D receptor antagonists for studying stroke. The linkage data provided herein, for the first time, provides such connection to stroke. Drugs could be designed to regulate PDE4D receptor activation that in turn can be

used to regulate signaling pathways and transcription events of genes downstream, such as Cbfa1.

In another embodiment of the invention, assays can be used to identify polypeptides that interact with one or more PDE4D polypeptides, as described herein. For example, a yeast two-hybrid system such as that described by Fields and Song (Fields, S. and Song, O., *Nature 340*:245-246 (1989)) can be used to identify polypeptides that interact with one or more PDE4D polypeptides. In such a yeast two-hybrid system, vectors are constructed based on the flexibility of a transcription factor that has two functional domains (a DNA binding domain and a transcription activation domain). If the two domains are separated but fused to two different proteins that interact with one another, transcriptional activation can be achieved, and transcription of specific markers (*e.g.*, nutritional markers such as His and Ade, or color markers such as lacZ) can be used to identify the presence of interaction and transcriptional activation. For example, in the methods of the invention, a first vector is used which includes a nucleic acid encoding a DNA binding domain and also an PDE4D polypeptide, splicing variant, fragment or derivative thereof, and a second vector is used which includes a nucleic acid encoding a transcription activation domain and also a nucleic acid encoding a polypeptide which potentially may interact with the PDE4D polypeptide, splicing variant, or fragment or derivative thereof (*e.g.*, a PDE4D polypeptide binding agent or receptor). Incubation of yeast containing the first vector and the second vector under appropriate conditions (*e.g.*, mating conditions such as used in the Matchmaker™ System from Clontech) allows identification of colonies which express the markers of interest. These colonies can be examined to identify the polypeptide(s) that interact with the PDE4D polypeptide or fragment or derivative thereof. Such polypeptides may be useful as agents that alter the activity of expression of a PDE4D polypeptide, as described above.

In more than one embodiment of the above assay methods of the present invention, it may be desirable to immobilize either PDE4D, the PDE4D binding agent, or other components of the assay on a solid support, in order to facilitate separation of complexed from uncomplexed forms of one or both of the polypeptides, as well as to accommodate automation of the assay. Binding of a test agent to the polypeptide, or interaction of the polypeptide with a binding agent in the

presence and absence of a test agent, can be accomplished in any vessel suitable for containing the reactants. Examples of such vessels include microtitre plates, test tubes, and micro-centrifuge tubes. In one embodiment, a fusion protein (*e.g.*, a glutathione-S-transferase fusion protein) can be provided which adds a domain that allows PDE4D or a PDE4D binding agent to be bound to a matrix or other solid support.

In another embodiment, modulators of expression of nucleic acid molecules of the invention are identified in a method wherein a cell, cell lysate, or solution containing a nucleic acid encoding PDE4D is contacted with a test agent and the expression of appropriate mRNA or polypeptide (*e.g.*, splicing variant(s)) in the cell, cell lysate, or solution, is determined. The level of expression of appropriate mRNA or polypeptide(s) in the presence of the test agent is compared to the level of expression of mRNA or polypeptide(s) in the absence of the test agent. The test agent can then be identified as a modulator of expression based on this comparison. For example, when expression of mRNA or polypeptide is greater (statistically significantly greater) in the presence of the test agent than in its absence, the test agent is identified as a stimulator or enhancer of the mRNA or polypeptide expression. Alternatively, when expression of the mRNA or polypeptide is less (statistically significantly less) in the presence of the test agent than in its absence, the test agent is identified as an inhibitor of the mRNA or polypeptide expression. The level of mRNA or polypeptide expression in the cells can be determined by methods described herein for detecting mRNA or polypeptide.

This invention further pertains to novel agents identified by the above-described screening assays. Accordingly, it is within the scope of this invention to further use an agent identified as described herein in an appropriate animal model. For example, an agent identified as described herein (*e.g.*, a test agent that is a modulating agent, an antisense nucleic acid molecule, a specific antibody, or a polypeptide-binding agent) can be used in an animal model to determine the efficacy, toxicity, or side effects of treatment with such an agent. Alternatively, an agent identified as described herein can be used in an animal model to determine the mechanism of action of such an agent. Furthermore, this invention pertains to uses of novel agents identified by the above-described screening assays for treatments as

described herein. In addition, an agent identified as described herein can be used to alter activity of a polypeptide encoded by PDE4D, or to alter expression of PDE4D, by contacting the polypeptide or the gene (or contacting a cell comprising the polypeptide or the gene) with the agent identified as described herein.

PHARMACEUTICAL COMPOSITIONS

The present invention also pertains to pharmaceutical compositions comprising agents described herein, particularly nucleotides encoding the polypeptides described herein; comprising polypeptides described herein (*e.g.*, one or more of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14); and/or comprising other splicing variants encoded by PDE4D; and/or an agent that alters (*e.g.*, enhances or inhibits) PDE4D gene expression or PDE4D polypeptide activity as described herein. For instance, a polypeptide, protein (*e.g.*, an PDE4D receptor), an agent that alters PDE4D gene expression, or a PDE4D binding agent or binding partner, fragment, fusion protein or prodrug thereof, or a nucleotide or nucleic acid construct (vector) comprising a nucleotide of the present invention, or an agent that alters PDE4D polypeptide activity, can be formulated with a physiologically acceptable carrier or excipient to prepare a pharmaceutical composition. The carrier and composition can be sterile. The formulation should suit the mode of administration.

Suitable pharmaceutically acceptable carriers include but are not limited to water, salt solutions (*e.g.*, NaCl), saline, buffered saline, alcohols, glycerol, ethanol, gum arabic, vegetable oils, benzyl alcohols, polyethylene glycols, gelatin, carbohydrates such as lactose, amylose or starch, dextrose, magnesium stearate, talc, silicic acid, viscous paraffin, perfume oil, fatty acid esters, hydroxymethylcellulose, polyvinyl pyrolidone, etc., as well as combinations thereof. The pharmaceutical preparations can, if desired, be mixed with auxiliary agents, *e.g.*, lubricants, preservatives, stabilizers, wetting agents, emulsifiers, salts for influencing osmotic pressure, buffers, coloring, flavoring and/or aromatic substances and the like which do not deleteriously react with the active agents.

The composition, if desired, can also contain minor amounts of wetting or emulsifying agents, or pH buffering agents. The composition can be a liquid solution, suspension, emulsion, tablet, pill, capsule, sustained release formulation, or

powder. The composition can be formulated as a suppository, with traditional binders and carriers such as triglycerides. Oral formulation can include standard carriers such as pharmaceutical grades of mannitol, lactose, starch, magnesium stearate, polyvinyl pyrolidone, sodium saccharine, cellulose, magnesium carbonate, etc.

Methods of introduction of these compositions include, but are not limited to, intradermal, intramuscular, intraperitoneal, intraocular, intravenous, subcutaneous, topical, oral and intranasal. Other suitable methods of introduction can also include gene therapy (as described below), rechargeable or biodegradable devices, particle acceleration devises ("gene guns") and slow release polymeric devices. The pharmaceutical compositions of this invention can also be administered as part of a combinatorial therapy with other agents.

The composition can be formulated in accordance with the routine procedures as a pharmaceutical composition adapted for administration to human beings. For example, compositions for intravenous administration typically are solutions in sterile isotonic aqueous buffer. Where necessary, the composition may also include a solubilizing agent and a local anesthetic to ease pain at the site of the injection. Generally, the ingredients are supplied either separately or mixed together in unit dosage form, for example, as a dry lyophilized powder or water free concentrate in a hermetically sealed container such as an ampule or sachette indicating the quantity of active agent. Where the composition is to be administered by infusion, it can be dispensed with an infusion bottle containing sterile pharmaceutical grade water, saline or dextrose/water. Where the composition is administered by injection, an ampule of sterile water for injection or saline can be provided so that the ingredients may be mixed prior to administration.

For topical application, nonsprayable forms, viscous to semi-solid or solid forms comprising a carrier compatible with topical application and having a dynamic viscosity preferably greater than water, can be employed. Suitable formulations include but are not limited to solutions, suspensions, emulsions, creams, ointments, powders, enemas, lotions, sols, liniments, salves, aerosols, etc., which are, if desired, sterilized or mixed with auxiliary agents, *e.g.,* preservatives, stabilizers, wetting agents, buffers or salts for influencing osmotic pressure, etc. The agent may be

incorporated into a cosmetic formulation. For topical application, also suitable are sprayable aerosol preparations wherein the active ingredient, preferably in combination with a solid or liquid inert carrier material, is packaged in a squeeze bottle or in admixture with a pressurized volatile, normally gaseous propellant, *e.g.*, pressurized air.

Agents described herein can be formulated as neutral or salt forms. Pharmaceutically acceptable salts include those formed with free amino groups such as those derived from hydrochloric, phosphoric, acetic, oxalic, tartaric acids, etc., and those formed with free carboxyl groups such as those derived from sodium, potassium, ammonium, calcium, ferric hydroxides, isopropylamine, triethylamine, 2-ethylamino ethanol, histidine, procaine, etc.

The agents are administered in a therapeutically effective amount. The amount of agents which will be therapeutically effective in the treatment of a particular disorder or condition will depend on the nature of the disorder or condition, and can be determined by standard clinical techniques. In addition, *in vitro* or *in vivo* assays may optionally be employed to help identify optimal dosage ranges. The precise dose to be employed in the formulation will also depend on the route of administration, and the seriousness of the symptoms of stroke, and should be decided according to the judgment of a practitioner and each patient's circumstances. Effective doses may be extrapolated from dose-response curves derived from *in vitro* or animal model test systems.

The invention also provides a pharmaceutical pack or kit comprising one or more containers filled with one or more of the ingredients of the pharmaceutical compositions of the invention. Optionally associated with such container(s) can be a notice in the form prescribed by a governmental agency regulating the manufacture, use or sale of pharmaceuticals or biological products, which notice reflects approval by the agency of manufacture, use of sale for human administration. The pack or kit can be labeled with information regarding mode of administration, sequence of drug administration (*e.g.*, separately, sequentially or concurrently), or the like. The pack or kit may also include means for reminding the patient to take the therapy. The pack or kit can be a single unit dosage of the combination therapy or it can be a plurality of unit dosages. In particular, the agents can be separated, mixed together

in any combination, present in a single vial or tablet. Agents assembled in a blister pack or other dispensing means is preferred. For the purpose of this invention, unit dosage is intended to mean a dosage that is dependent on the individual pharmacodynamics of each agent and administered in FDA approved dosages in standard time courses.

METHODS OF THERAPY

The present invention encompasses methods of treatment (prophylactic and/or therapeutic) for stroke or a susceptibility to stroke, such as individuals in the target populations described herein particularly ischemic (*e.g.*, carotid and cardiogenic strokes) and TIA, using a PDE4D therapeutic agent. A "PDE4D therapeutic agent" is an agent that alters (*e.g.*, enhances or inhibits) PDE4D polypeptide (enzymatic activity) and/or PDE4D gene expression, as described herein (*e.g.*, a PDE4D agonist or antagonist). PDE4D therapeutic agents can alter PDE4D polypeptide activity or nucleic acid expression by a variety of means, such as, for example, by providing additional PDE4D polypeptide or by upregulating the transcription or translation of the PDE4D gene; by altering posttranslational processing of the PDE4D polypeptide; by altering transcription of PDE4D splicing variants; or by interfering with PDE4D polypeptide activity (*e.g.*, by binding to a PDE4D polypeptide), or by downregulating the transcription or translation of the PDE4D gene.

In particular, the invention relates to methods of treatment for stroke or susceptibility to stroke (for example, for individuals in an at-risk population such as those described herein); as well as to methods of treatment for myocardial infarction, atherosclerosis, acute coronary syndrome (*e.g.*, unstable angina, non-ST-elevation myocardial infarction (NSTEMI) or ST-elevation myocardial infarction (STEMI)); for decreasing risk of a second myocardial infarction; for atherosclerosis, such as for patients requiring treatment (*e.g.*, angioplasty, stents, coronary artery bypass graft) to restore blood flow in arteries (*e.g.*, coronary arteries) and peripheral arterial occlusive disease.

Representative PDE4D therapeutic agents include the following:

nucleic acids or fragments or derivatives thereof described herein, particularly nucleotides encoding the polypeptides described herein and vectors comprising such nucleic acids (*e.g.*, a gene, cDNA, and/or mRNA, double-stranded interfering RNA, a nucleic acid encoding a PDE4D polypeptide or active fragment or derivative thereof, or an oligonucleotide; for example, SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12 or a nucleic acid encoding SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, or fragments or derivatives thereof), antisense nucleic acids or small double-stranded interfering RNA;

polypeptides described herein (*e.g.*, one or more of SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14, and/or other splicing variants encoded by PDE4D, or fragments or derivatives thereof);

other polypeptides (*e.g.*, PDE4D receptors); PDE4D binding agents; peptidomimetics; fusion proteins or prodrugs thereof; antibodies (*e.g.*, an antibody to a mutant PDE4D polypeptide, or an antibody to a non-mutant PDE4D polypeptide, or an antibody to a particular splicing variant encoded by PDE4D, as described above); ribozymes; other small molecules;

and other agents that alter (*e.g.*, inhibit or antagonize) PDE4D gene expression or polypeptide activity, or that regulate transcription of PDE4D splicing variants (*e.g.*, agents that affect which splicing variants are expressed, or that affect the amount of each splicing variant that is expressed).

More than one PDE4D therapeutic agent can be used concurrently, if desired.

The PDE4D therapeutic agent that is a nucleic acid is used in the treatment of stroke. The term, "treatment" as used herein, refers not only to ameliorating symptoms associated with the disease, but also preventing or delaying the onset of the disease, and also lessening the severity or frequency of symptoms of the disease, preventing or delaying the occurrence of a second episode of the disease or condition; and/or also lessening the severity or frequency of symptoms of the disease or condition. In the case of atherosclerosis, "treatment" also refers to a minimization or reversal of the development of plaques. The therapy is designed to alter (*e.g.*, inhibit or enhance), replace or supplement activity of a PDE4D polypeptide in an individual. For example, a PDE4D therapeutic agent can be administered in order to

upregulate or increase the expression or availability of the PDE4D gene or of specific splicing variants of PDE4D, or, conversely, to downregulate or decrease the expression or availability of the PDE4D gene or specific splicing variants of PDE4D. Upregulation or increasing expression or availability of a native PDE4D gene or of a particular splicing variant could interfere with or compensate for the expression or activity of a defective gene or another splicing variant; downregulation or decreasing expression or availability of a native PDE4D gene or of a particular splicing variant could minimize the expression or activity of a defective gene or the particular splicing variant and thereby minimize the impact of the defective gene or the particular splicing variant.

The PDE4D therapeutic agent(s) are administered in a therapeutically effective amount (*i.e.*, an amount that is sufficient to treat the disease, such as by ameliorating symptoms associated with the disease, preventing or delaying the onset of the disease, and/or also lessening the severity or frequency of symptoms of the disease). The amount which will be therapeutically effective in the treatment of a particular individual's disorder or condition will depend on the symptoms and severity of the disease, and can be determined by standard clinical techniques. In addition, *in vitro* or *in vivo* assays may optionally be employed to help identify optimal dosage ranges. The precise dose to be employed in the formulation will also depend on the route of administration, and the seriousness of the disease or disorder, and should be decided according to the judgment of a practitioner and each patient's circumstances. Effective doses may be extrapolated from dose-response curves derived from *in vitro* or animal model test systems.

In one embodiment, a nucleic acid of the invention (*e.g.*, a nucleic acid encoding a PDE4D polypeptide, such as SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12; or another nucleic acid that encodes a PDE4D polypeptide or a splicing variant, derivative or fragment thereof, such as a nucleic acid encoding SEQ ID NO: 2, 3, 4, 5, 6, 7, 8, 9, 10, 12 or 14) can be used, either alone or in a pharmaceutical composition as described above. For example, PDE4D or a cDNA encoding the PDE4D polypeptide, either by itself or included within a vector, can be introduced into cells (either *in vitro* or *in vivo*) such that the cells produce native PDE4D polypeptide. If necessary, cells that have

been transformed with the gene or cDNA or a vector comprising the gene or cDNA can be introduced (or re-introduced) into an individual affected with the disease. Thus, cells which, in nature, lack native PDE4D expression and activity, or have mutant PDE4D expression and activity, or have expression of a disease-associated PDE4D splicing variant, can be engineered to express PDE4D polypeptide or an active fragment of the PDE4D polypeptide (or a different variant of PDE4D polypeptide). In another embodiment, nucleic acid encoding the PDE4D polypeptide, or an active fragment or derivative thereof, can be introduced into an expression vector, such as a viral vector, and the vector can be introduced into appropriate cells in an animal. Other gene transfer systems, including viral and nonviral transfer systems, can be used. Alternatively, nonviral gene transfer methods, such as calcium phosphate coprecipitation, mechanical techniques (*e.g.*, microinjection); membrane fusion-mediated transfer via liposomes; or direct DNA uptake, can also be used.

Alternatively, in another embodiment of the invention, a nucleic acid of the invention; a nucleic acid complementary to a nucleic acid of the invention; or a portion of such a nucleic acid (*e.g.*, an oligonucleotide as described below), can be used in "antisense" therapy, in which a nucleic acid (*e.g.*, an oligonucleotide) which specifically hybridizes to the mRNA and/or genomic DNA of PDE4D is administered or generated *in situ*. The antisense nucleic acid that specifically hybridizes to the mRNA and/or DNA inhibits expression of the PDE4D polypeptide, *e.g.*, by inhibiting translation and/or transcription. Binding of the antisense nucleic acid can be by conventional base pair complementarity, or, for example, in the case of binding to DNA duplexes, through specific interaction in the major groove of the double helix.

An antisense construct of the present invention can be delivered, for example, as an expression plasmid as described above. When the plasmid is transcribed in the cell, it produces RNA that is complementary to a portion of the mRNA and/or DNA that encodes PDE4D polypeptide. Alternatively, the antisense construct can be an oligonucleotide probe that is generated *ex vivo* and introduced into cells; it then inhibits expression by hybridizing with the mRNA and/or genomic DNA of PDE4D. In one embodiment, the oligonucleotide probes are modified oligonucleotides that

are resistant to endogenous nucleases, *e.g.*, exonucleases and/or endonucleases, thereby rendering them stable *in vivo*. Exemplary nucleic acid molecules for use as antisense oligonucleotides are phosphoramidate, phosphothioate and methylphosphonate analogs of DNA (see also U.S. Patent Nos. 5,176,996; 5,264,564; and 5,256,775). Additionally, general approaches to constructing oligomers useful in antisense therapy are also described, for example, by Van der Krol *et al.* ((1988) *Biotechniques* 6:958-976); and Stein *et al.* ((1988) *Cancer Res* 48:2659-2668). With respect to antisense DNA, oligodeoxyribonucleotides derived from the translation initiation site, *e.g.*, between the -10 and +10 regions of PDE4D sequence, are preferred.

To perform antisense therapy, oligonucleotides (mRNA, cDNA or DNA) are designed that are complementary to mRNA encoding PDE4D. The antisense oligonucleotides bind to PDE4D mRNA transcripts and prevent translation. Absolute complementarity, although preferred, is not required. a sequence "complementary" to a portion of an RNA, as referred to herein, indicates that a sequence has sufficient complementarity to be able to hybridize with the RNA, forming a stable duplex; in the case of double-stranded antisense nucleic acids, a single strand of the duplex DNA may thus be tested, or triplex formation may be assayed. The ability to hybridize will depend on both the degree of complementarity and the length of the antisense nucleic acid, as described in detail above. Generally, the longer the hybridizing nucleic acid, the more base mismatches with an RNA it may contain and still form a stable duplex (or triplex, as the case may be). One skilled in the art can ascertain a tolerable degree of mismatch by use of standard procedures.

The oligonucleotides used in antisense therapy can be DNA, RNA, or chimeric mixtures or derivatives or modified versions thereof, single-stranded or double-stranded. The oligonucleotides can be modified at the base moiety, sugar moiety, or phosphate backbone, for example, to improve stability of the molecule, hybridization, etc. The oligonucleotides can include other appended groups such as peptides (*e.g.*, for targeting host cell receptors *in vivo*), or agents facilitating transport across the cell membrane (see, *e.g.*, Letsinger *et al.* (1989) *Proc. Natl. Acad. Sci. USA* 86:6553-6556; Lemaitre *et al.*, (1987), *Proc. Natl. Acad. Sci. USA* 84:648-652; PCT International Publication No. W088/09810) or the blood-brain barrier (see, *e.g.*,

PCT International Publication No. W089/10134), or hybridization-triggered cleavage agents (see, *e.g.*, Krol *et al.* (1988) *BioTechniques* 6:958-976) or intercalating agents. (See, *e.g.*, Zon, (1988), *Pharm. Res.* 5:539-549). To this end, the oligonucleotide may be conjugated to another molecule (*e.g.*, a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent).

The antisense molecules are delivered to cells that express PDE4D *in vivo*. A number of methods can be used for delivering antisense DNA or RNA to cells; *e.g.*, antisense molecules can be injected directly into the tissue site, or modified antisense molecules, designed to target the desired cells (*e.g.*, antisense linked to peptides or antibodies that specifically bind receptors or antigens expressed on the target cell surface) can be administered systematically. Alternatively, in another embodiment, a recombinant DNA construct is utilized in which the antisense oligonucleotide is placed under the control of a strong promoter (*e.g.*, pol III or pol II). The use of such a construct to transfect target cells in the patient results in the transcription of sufficient amounts of single stranded RNAs that will form complementary base pairs with the endogenous PDE4D transcripts and thereby prevent translation of the PDE4D mRNA. For example, a vector can be introduced *in vivo* such that it is taken up by a cell and directs the transcription of an antisense RNA. Such a vector can remain episomal or become chromosomally integrated, as long as it can be transcribed to produce the desired antisense RNA. Such vectors can be constructed by recombinant DNA technology methods standard in the art and described above. For example, a plasmid, cosmid, YAC or viral vector can be used to prepare the recombinant DNA construct that can be introduced directly into the tissue site. Alternatively, viral vectors can be used which selectively infect the desired tissue, in which case administration may be accomplished by another route (*e.g.*, systemically).

Methods of modulating PDE4D expression by administering an RNA inhibitor of the activity of the target protein are also possible. The term "RNA inhibitor" refers to an inhibitory RNA that silences expression of the target protein by RNA interference (McManus, M.T. and Sharp, P.A., 2002. *Nat. Rev. Genet.* 3:737-47; Hannon, G.J., 2002. *Nature* 418:244-51; Paddison, P.J. and Hannon, G.J., 2002. *Cancer Cell* 2:17-23). RNA interference is conserved throughout evolution,

from *C. elegans* to humans, and is believed to function in protecting cells from invasion by RNA viruses. When a cell is infected by a dsRNA virus, the dsRNA is recognized and targeted for cleavage by an RNaseIII-type enzyme termed Dicer. The Dicer enzyme "dices" the RNA into short duplexes of 21 nucleotides, termed short-interfering RNAs or siRNAs, composed of 19 nucleotides of perfectly paired ribonucleotides with two unpaired nucleotides on the 3' end of each strand. These short duplexes associate with a multiprotein complex termed RISC, and direct this complex to mRNA transcripts with sequence similarity to the siRNA. As a result, nucleases present in the RISC complex cleave the mRNA transcript, thereby abolishing expression of the gene product. In the case of viral infection, this mechanism would result in destruction of viral transcripts, thus preventing viral synthesis. Since the siRNAs are double-stranded, either strand has the potential to associate with RISC and direct silencing of transcripts with sequence similarity.

Recently, it was determined that gene silencing could be induced by presenting the cell with the siRNA, mimicking the product of Dicer cleavage (Elbashir, S.M., *et al.*, 2001. *Nature* 411:494-8; Elbashir, S.M., *et al.*, 2001. *Genes Dev.* 15:188-200). Synthetic siRNA duplexes maintain the ability to associate with RISC and direct silencing of mRNA transcripts, thus providing researchers with a powerful tool for gene silencing in mammalian cells. Yet another method to introduce the dsRNA for gene silencing is shRNA, for short hairpin RNA (Paddison, P.J., *et al.*, 2002. *Genes Dev.* 16:948-58; Brummelkamp, T.R., *et al.*, 2002 *Science* 296:550-3; Sui, G., *et al.*, 2002. *Proc. Natl. Acad. Sci. U.S.A.* 99:5515-20). In this case, a desired siRNA sequence is expressed from a plasmid (or virus) containing an “shRNA” gene having an inverted repeat with an intervening loop sequence to form a hairpin structure. The resulting shRNA transcript containing the hairpin is subsequently processed by Dicer to produce siRNAs for silencing. Plasmid-based shRNAs can be expressed stably in cells, allowing long-term gene silencing in cells, or even in animals (McCaffrey,A.P., *et al.*, 2002. *Nature* 418:38-9; Xia, H., *et al.*, 2002. *Nat. Biotech.* 20:1006-10; Lewis, D.L., *et al.*, 2002. *Nat. Genetics* 32:107-8; Rubinson, D.A., *et al.*, 2003. *Nat. Genetics* 33:401-6; Tiscornia, G., *et al.*, (2003) *Proc. Natl. Acad. Sci. U.S.A.* 100:1844-8). RNA interference has been successfully

used therapeutically to protect mice from fulminant hepatitis (Song, E., *et al.*, 2003. *Nat. Medicine* 9:347-51).

Endogenous PDE4D expression can be also reduced by inactivating or "knocking out" PDE4D or its promoter using targeted homologous recombination (*e.g.*, see Smithies *et al.* (1985) *Nature* 317:230-234; Thomas & Capecchi (1987) *Cell* 51:503-512; Thompson *et al.* (1989) *Cell* 5:313-321). For example, a mutant, non-functional PDE4D (or a completely unrelated DNA sequence) flanked by DNA homologous to the endogenous PDE4D (either the coding regions or regulatory regions of PDE4D) can be used, with or without a selectable marker and/or a negative selectable marker, to transfect cells that express PDE4D *in vivo*. Insertion of the DNA construct, via targeted homologous recombination, results in inactivation of PDE4D. The recombinant DNA constructs can be directly administered or targeted to the required site *in vivo* using appropriate vectors, as described above. Alternatively, expression of non-mutant PDE4D can be increased using a similar method: targeted homologous recombination can be used to insert a DNA construct comprising a non-mutant, functional PDE4D (*e.g.*, a gene having SEQ ID NO: 1 which may optionally comprise at least one polymorphism shown in Tables 11 and 12), or a portion thereof, in place of a mutant PDE4D in the cell, as described above. In another embodiment, targeted homologous recombination can be used to insert a DNA construct comprising a nucleic acid that encodes a PDE4D polypeptide variant that differs from that present in the cell.

Alternatively, endogenous PDE4D expression can be reduced by targeting deoxyribonucleotide sequences complementary to the regulatory region of PDE4D (*i.e.*, the PDE4D promoter and/or enhancers) to form triple helical structures that prevent transcription of PDE4D in target cells in the body. (See generally, Helene, C. (1991) *Anticancer Drug Des.*, 6(6):569-84; Helene, C., *et al.* (1992) *Ann, N.Y. Acad. Sci.*, 660:27-36; and Maher, L. J. (1992) *Bioassays* 14(12):807-15). Likewise, the antisense constructs described herein, by antagonizing the normal biological activity of one of the PDE4D proteins, can be used in the manipulation of tissue, *e.g.*, tissue differentiation, both *in vivo* and *for ex vivo* tissue cultures. Furthermore, the anti-sense techniques (*e.g.*, microinjection of antisense molecules, or transfection with plasmids whose transcripts are anti-sense with regard to a PDE4D mRNA or gene

sequence) can be used to investigate role of PDE4D in developmental events, as well as the normal cellular function of PDE4D in adult tissue. Such techniques can be utilized in cell culture, but can also be used in the creation of transgenic animals.

In yet another embodiment of the invention, other PDE4D therapeutic agents as described herein can also be used in the treatment or prevention of stroke. The therapeutic agents can be delivered in a composition, as described above, or by themselves. They can be administered systemically, or can be targeted to a particular tissue. The therapeutic agents can be produced by a variety of means, including chemical synthesis; recombinant production; *in vivo* production (*e.g.*, a transgenic animal, such as U.S. Patent No. 4,873,316 to Meade *et al.*), for example, and can be isolated using standard means such as those described herein.

A combination of any of the above methods of treatment (*e.g.*, administration of non-mutant PDE4D polypeptide in conjunction with antisense therapy targeting mutant PDE4D mRNA; administration of a first splicing variant encoded by PDE4D in conjunction with antisense therapy targeting a second splicing encoded by PDE4D), can also be used.

The invention will be further described by the following non-limiting examples. The teachings of all publications cited herein are incorporated herein by reference in their entirety.

EXAMPLES

EXAMPLE 1: PDE4D VARIATIONS AND HAPLOTYPES INCREASE RISK FOR STROKE

Icelandic Stroke Patients and Phenotype Characterization

A population-based list containing 2543 Icelandic stroke patients, diagnosed from 1993 through 1997, was derived from two major hospitals in Iceland and the Icelandic Heart Association (the study was approved by the Icelandic Data Protection Commission of Iceland and the National Bioethics Committee). Patients with hemorrhagic stroke represented 6% of all patients (patients with the Icelandic type of hereditary cerebral hemorrhage with amyloidosis and patients with subarachnoid

hemorrhage were excluded). Ischemic stroke accounted for 67% of the total patients and TIAs 27%. The distribution of stroke suptypes in this study is similar to that reported in other Caucasian populations (Mohr, J.P., *et al., Neurology, 28*:754-762 (1978); L. R. Caplan, *In Stroke, A Clinical Approach* (Butterworth-Heinemann, Stoneham, MA, ed 3, (1993)).

The list of approximately 2000 living patients was run through our computerized genealogy database. A comprehensive genealogy database that has been established at deCODE genetics was used to cluster the patients in pedigrees. Each version of the computerized genealogy database was reversibly encrypted by the Data Protection Commission of Iceland before arriving at the laboratory (Gulcher, J.R., *et al.*, *Eur. J. Hum. Genet. 8*:739 (2000)). The database uses a patient list, with encrypted personal identifiers, as input, and recursive algorithms to find all ancestors in the database who are related to any member on the input list within a given number of generations back (Gulcher, J.R., and Stefansson, K., *Clin. Chem. Lab. Med. 36*:523 (1998)) covering the whole Icelandic nation. The cluster function then searches for ancestors who are common to any two or more members of the input list. One hundred and seventy-nine families with two or more living patients were chosen for the study with a total of 476 patients connected within 6 meioses (6 meioses connect second cousins). Informed consent was obtained from all patients and their relatives whose DNA samples were used in the linkage scan. The mean separation between affected pairs is 4.8 meioses. Of the patients selected for the study 73% had ischemic strokes, 23% TIAs and 4% hemorrhagic strokes.

In the selected families, hemorrhagic stroke patients clustered with ischemic stroke and TIA patients, and there were no families with a striking preponderance of hemorrhagic stroke or of the subtypes of ischemic stroke. Patients with ischemic stroke were reclassified according to the TOAST (Trial of Org 10172 in Acute Stroke Treatment) sub-classification system for stroke (Adams, H.P., Jr., *et al., Stroke, 24*:34-41 (1993)). This system includes five categories: (1) large-artery atherosclerosis, (2) cardioembolism, (3) small-artery occlusion (lacune), (4) stroke of other determined etiology and (5) stroke of undetermined etiology. The diagnoses were based on clinical features and on data from ancillary diagnostic studies. Patients defined with large-artery atherosclerosis had clinical and brain imaging

findings of cerebral cortical dysfunction and either significant (>70%) stenosis (this is a stricter criteria than used in TOAST where 50% stenosis is the cut-off) or occlusion of a major brain artery or branch cortical artery. Potential sources of cardiogenic embolism were excluded. The category cardioembolism included patients with at least one cardiac source for an embolus and potential large-artery sources of thromobosis and embolism was eliminated. Patients with small-artery occlusion had one of the traditional clinical lacunar syndromes and no evidence of cerebral cortical dysfunction. Potential cardiac source of embolus and stenosis >70% in an ipsilateral extracranial artery was excluded. The category, acute stroke of other determined etiology, included patients with rare causes of stroke and patients with two or more potential causes of stroke. If the causes of stroke could not be determined despite extensive evaluation patients were included in the category stroke of undetermined etiology. FIG. 1 displays two pedigrees each affected by several of the stroke subtypes, including hemorrhagic stroke. Apparently what is inherited in stroke is the broadly defined phenotype.

Genome-wide scan

A genome-wide scan was performed using a framework map of about 1000 microsatellite markers. The DNA samples were genotyped using approximately 1000 fluorescently labelled primers. A microsatellite screening set based in part on the ABI Linkage Marker (v2) screening set and the ABI Linkage Marker (v2) intercalating set in combination with 500 custom-made markers were developed. All markers were extensively tested for robustness, ease of scoring, and efficiency in 4X multiplex PCR reactions. In the framework marker set, the average spacing between markers was approximately 4 cM with no gaps larger than 10 cM. Marker positions were obtained from the Marshfield map, except for a three-marker putative inversion on chromosome 8 (Jonsdottir, G.M., *et al., Am. J. Hum. Genet., 67 (Suppl. 2)*:332 (2000); Yu, A., *et al., Am. J. Hum. Genet. 67 (Suppl. 2)*:10 (2000). The PCR amplifications were set up, run and pooled on Perkin Elmer/Applied Biosystems 877 Integrated Catalyst Thermocyclers with a similar protocol for each marker. The reaction volume used was 5 µl and for each PCR reaction 20 ng of genomic DNA was amplified in the presence of 2 pmol of each primer, 0.25 U AMPLITAQ GOLD

(DNA polymerase; trademark of Roche Molecular Systems), 0.2 mM dNTPs and 2.5 mM MgCl2 (buffer was supplied by manufacturer). The PCR conditions used were 95°C for 10 minutes, then 37 cycles of 15 s at 94°C, 30s at 55°C and 1 min at 72°C. The PCR products were supplemented with the internal size standard and the pools were separated and detected on Applied Biosystems model 377 Sequencer using v3.0 GENESCAN (peak calling software; trademark of Applied Biosystems). Alleles were called automatically with the TRUEALLELE (computer program for alleles identification; trademark of Cybergenetics, Inc.) program, and the program, DECODE-GT (computer editing program that works downstream of the TRUEALLELE program; trademark of deCODE genetics), was used to fractionate according to quality and edit the called genotypes (Palsson, B., *et al., Genome Res. 9*:1002 (1999)). At least 180 Icelandic controls were genotyped to derive allelic frequencies.

A total of 476 patients and 438 relatives were genotyped. The data was analyzed and the statistical significance determined by applying affecteds-only allele-sharing methods (which does not specify any particular inheritance model) implemented in the ALLEGRO (computer program for multipoint linkage analysis; trademark of deCODE genetics) program that calculates lod scores based on multipoint calculations. Our baseline linkage analysis uses the S_{pairs} scoring function (Kruglyak, L., *et al., Am. J. Hum. Genet., 58*:1347 (1996)), the exponential allele-sharing model (Kong, A. and Cox, N.J., *Am. J. Hum. Genet., 61*:1179 (1997)), and a family weighting scheme which is halfway, on the log scale, between weighting each affected pair equally and weighting each family equally. In the analysis we treat all genotyped individuals who are not affected as "unknown". All linkage analyses in this paper were performed using multipoint calculation with the program ALLEGRO (deCODE genetics) (Gudbjartsson, D.F., *et al., Nat. Genet. 25*:12 (2000)).

The allele sharing lod scores for the genome scan using the framework map showed three regions that achieved a lod score above 1.0. Two of these regions are on chromosome 5q. The first peak is at approximately 69 cM with a lod score of 2.00. The second peak is at 99 cM with a lod score of 1.14. The third region is on chromosome 14q at 55 cM with a lod score of 1.24.

The information for linkage at the 5q locus was increased by genotyping an additional 45 markers over a 45 cM segment which spanned both peaks. The information used here is defined by Nicolae (D. L. Nicolae, Thesis, University of Chicago (1999)) and has been demonstrated to be asymptotically equivalent to a classical measure of the fraction of missing information (Dempster, A.P., *et al.*, *J. R. Statist. Soc. B, 39*:1 (1977)). While the lod score at the second peak dropped slightly to around 1.05, the lod score at the first peak increased to 3.39. However, close inspection of our results suggested that not only does the Marshfield genetic map lack resolution (many markers assigned the same map location), but also there may be some errors in their order. As a result, the genetic length of the region estimated using our material was substantially greater than what is reported. By modifying the ALLEGRO (deCODE genetics) program, we applied the EM algorithm to our data to estimate the genetic distances between markers. We found that our estimate of the genetic length of the region was substantially longer than that given in the Marshfield map. This indicates a problem with marker order because, in general, incorrect marker order leads to an increased number of apparent crossovers and increases the apparent genetic length.

Physical and genetic mapping

The marker order and inter-marker distances were improved by constructing high density physical and genetic maps over a 20 cM region between markers D5S474 and D5S2046. A combination of data from coincident hybridizations of BAC membranes using a high density of STSs and the Fingerprinting Contig database was used to build large contigs of BACs from the RPCI -11 library. The order of the linkage markers was also confirmed by high-resolution genetic mapping using the stroke families supplemented with over 112 other large nuclear families. High resolution genetic mapping was used both to anchor and place in order contigs found by physical mapping as well as to obtain accurate inter-marker distances for the correctly ordered markers. Data from 112 Icelandic nuclear families (sibships with their parents, containing from two to seven siblings) were analyzed together with the nuclear families available within the stroke pedigrees. For the purpose of genetic mapping the 112 nuclear families alone provide 588 meioses, and the total

number of meioses available for mapping was over 2000. By comparison, the Marshfield genetic map was constructed based on 182 meioses. The large number of meiotic events within our families provides the ability to map markers to the resolution of 0.5 to 1.0 cM. Combining this information with the physical map resulted in a highly reliable order of markers and inter-marker distances within this 20 cM region. Linkage markers common to the genetic and physical maps were used to anchor and place in order four of the physically mapped contigs. By integrating the genetic and physical maps a most likely order of 30 polymorphic markers was derived.

BAC contigs were generated by a method that combines coincident primer hybridization with data mining. The RPCI-11 human male BAC library segments 1 & 2 (Pieter de Jong, Children's Hospital Oakland Research Institute) containing about 200,000 clones with a 12X coverage, were gridded using a 6x6 double offset pattern in 23 cm x 23 cm membranes with a BioGrid robot (Biorobotics Ltd., Cambridge, UK). Initially, hybridizations were performed with markers in the region of interest according to their location in the Weizmann Institute Unified Database. Primer sequences were analyzed and discarded according to their content of known repeats, *E. coli* and vector sequences (the analysis was performed using software developed at deCODE genetics). One hundred and fifty markers in the region (30 polymorphic markers used in linkage and 120 generated from STSs) separated by an average of 130 kb were used. The selected markers were used to generate two ^{32}P labelled probes, F that contained the pooled forward primers and R that contained the pooled reverse primers. Reading of positive signals was performed automatically from digitized images of resulting autoradiograms by informatics tools developed at deCODE genetics. The coincident signals in both hybridizations were selected as positive clones. A set of overlapping clones was assembled through a combination of hybridization and BAC fingerprint walking. Fingerprints of positive clones were analyzed using the FPC database developed at the Sanger Center. Data from FPC contigs prebuilt with a cutoff of 3e-12 and from sequence datamining was integrated with the hybridization results. BACs in the region detected by data mining and hybridization were re-arrayed using a Multiprobe IIex robot (Packard, Meriden, CT). Small membranes (8 cm x 12 cm) were gridded

in 6x6 double offset pattern and individually hybridized with the markers of interest. Positive patterns were transferred using transparencies to an Excel file containing macros to provide BAC to marker associations. A visual map was generated by combining the hybridization, fingerprinting and sequence data. New markers were generated from BAC end sequences to close the gap. After several rounds of hybridization positive BACs were assembled into 7 contigs covering approximately 20 Mb. Thirty of the polymorphic markers used in linkage were assigned to four of the contigs. Estimation of contig lengths and distance between markers assigned to them was based on the FPC program.

Twenty-seven of our 30 linkage markers mapped to three contigs in the October 2000 release from UCSC, the UC Santa Cruz (UCSC) draft assembly. The marker order within the contigs is in agreement with our order with the exception of two markers. Although the UCSC assemblies are improving, some contigs have incorrect order, orientation, or contig assembly. We believe that high resolution genetic mapping and perhaps focused hybridization experiments are still necessary to confirm accuracy of sequence assemblies. In addition, high resolution genetic mapping provides better estimates of inter-marker genetic distances that are also important for linkage analysis (Halpern, J. and Whittermore, A.S., *Hum. Hered. 49*:194 (1999); Daw, E.W., *et al., Genet. Epidemiol. 19*:366 (2000)).

Statistical Methods for Linkage Analysis

Multipoint, affected-only allele-sharing methods were used in the analyses to assess evidence for linkage. All results, both the LOD-score and the non-parametric linkage (NPL) score, were obtained using the program Allegro (Gudbjartsson *et al., Nat. Genet. 25:*12-3, 2000). Our baseline linkage analysis, as previously described (Gretarsdottir *et al., Am J Hom Genet, 70*:593-603, 2002), uses the S_{pairs} scoring function (Whittemore, A.S., Halpern, J. (1994), *Biometrics 50*:118-27; Kruglyak L, *et al.* (1996), *Am J Hum Genet 58*:1347-63), the exponential allele-sharing model (Kong, A. and Cox, N.J. (1997), *Am J Hum Genet 61*:1179-88) and a family weighting scheme that is halfway, on the log-scale, between weighting each affected pair equally and weighting each family equally. The information measure we use is part of the Allegro program output and the information value equals zero if the

marker genotypes are completely uninformative and equals one if the genotypes determine the exact amount of allele sharing by decent among the affected relatives (Gretarsdottir *et al.*, *Am. J. Hom. Genet, 70*:593-603, (2002)). We computed the P-values two different ways and here report the less significant result. The first P-value was computed on the basis of large sample theory; the distribution of $Z_{lr} = \sqrt{(2[\log_e(10)LOD])}$ approximates a standard normal variable under the null hypothesis of no linkage (Kong, A. and Cox, N.J. (1997), *Am J Hum Genet 61*:1179-88). The second P-value was calculated by comparing the observed LOD-score with its complete data sampling distribution under the null hypothesis (Gudbjartsson *et al., Nat. Genet. 25:*12-3, 2000). When the data consist of more than a few families, as is the case here, these two P-values tend to be very similar.

Final linkage results and localization

Linkage analysis including genotypes from the higher density markers using the deCODE marker order resulted in a lod score of 4.40 ($P = 3.9 \times 10^{-6}$) on chromosome 5q12 at the marker D5S2080. The reported P value is part of the output of the ALLEGRO (deCODE genetics) program which was developed at deCODE and has become a standard linkage program worldwide over the last 3 years (Gudbjartsson *et al., Nat. Genet. 25:*12-3, 2000). We have given it to over 200 academic departments around the world free of charge and it is widely used. The locus has been designated as *STRK1*. With the addition of these extra markers, it was possible to narrow down the region to a segment less than 6 cM, from D5S1474 to D5S398, as defined by one drop in lod.

To further investigate the contribution of this susceptibility locus to stroke, a range of parametric models were fitted to the data. However, all analyses were still *affecteds only* in the sense that individuals were either classified as affecteds or having unknown disease status. A lod score of 4.08 was obtained with a dominant model where the allele frequency of the susceptibility gene was assumed to be 5% and carriers of the alteration were assumed to have seven-fold the risk of a non-carrier. By inspecting the individual families, no obvious correlation was seen between families that contribute positively to the linkage results with the prevalence of hypertension, diabetes or hyperlipidemias. When the data were reanalyzed with

the hemorrhagic stroke patients removed, the allele sharing lod score increased to 4.86 at D5S2080. Although this 0.46 increase in log score suggests that *STRK1* is involved primarily in ischemic stroke and TIAs, it is not statistically significant based on simulations (one sided P equals 0.09). In order to assess whether such a change in lod score would be likely to occur by chance we selected 1000 random sets of 22 patients whose status we then changed to "unknown" in an analysis. The P value we present is the fraction of the 1000 simulations which produce a lod score increase at the peak locus equal to or greater than that which we observed by changing the affection status of the 22 hemorrhagic stroke patients to "unknown".

Identification of Allelic Association

All microsatellite markers in the approx. 6 cM interval (markers from D5S398 to D5S1474) were analyzed with respect to allelic association.

Microsatellite allelic association

We initially genotyped 864 Icelandic stroke patients and 908 controls using a total of 98 microsatellite markers. These markers are distributed over a region of approximately 11 Mb. The region is centered on our linkage peak and corresponds to the 2 LOD drop. The density of markers is greater in the central 3.7 Mb portion of the region, which includes the 1 LOD drop, with an average spacing of one marker every 53 kb. We have designated this central region, which is flanked by markers D5S1474 and D5S398, as the *STRK1* interval. Three markers, AC027322-5, D5S2121 and AC008818-1, showed a difference in allelic frequency between patients and controls with p-values less than 0.01 (Table 1). Correcting for the relatedness of the Icelandic patients had little impact on the p-values, but after correcting for the number of markers and alleles tested none of these p-values were significant (Table 1).

We had previously observed that our linkage peak increased, albeit not significantly, when excluding the hemorrhagic stroke patients. We therefore tested only those patients with ischemic stroke or TIA for association to the markers. In addition, our ischemic stroke and TIA patients have been sub-classified according to the TOAST research criteria and we also repeated the association analysis separately

for patients with the three TOAST subcategories: cardiogenic, carotid (greater than 70% stenosis) and small vessel occlusive disease. Lastly, we tested the combination of patients with cardiogenic and carotid stroke, since these categories of stroke are most clearly related to atherosclerosis. The results for each of these association studies are presented in Table 1. Three of the tests, one for cardiogenic stroke (AC008818-1), one for carotid stroke (DG5S397), and one for the combination of carotid and cardiogenic stroke (AC008818-1) were significant even after correcting for multiple testing (Table 1). The marker DG5S397 is located within the *PDE4D* gene and AC008818-1 is in the 5' end of *PDE4D* and in the overlapping gene Prostate androgen-regulated transcript (*PART1*) whose transcript is on the other strand going in the opposite direction. *PDE4D* is an important regulator of intracellular levels of cAMP and is expressed widely. *PART1* encodes a putative protein with unknown function predominantly expressed in the prostate gland and in several cancer cell lines. Physical locations of all genotyped markers and *PDE4D* and *PART1* exons are available in Table 2C. The association results for the combination of carotid and cardiogenic stroke were particularly striking with an allele frequency of 35.5% in patients for allele 0 (the CEPH reference allele) of marker AC008818-1 versus 25.5% in controls. The unadjusted p-value for this marker is 0.0000015, and after adjusting for multiple testing of markers is 0.00025 (Table 1). This remains significant even after adjusting for the several phenotypes studied. The risk of this allele to the other alleles of this marker, assuming the multiplicative model Terwilliger, J.D. & Ott, J. A haplotype-based 'haplotype relative risk' approach to detecting allelic associations. *Hum Hered* 42, 337-46 (1992) and Falk, C.T. & Rubinstein, P. Haplotype relative risks: an easy reliable way to construct a proper control sample for risk calculations. *Ann Hum Genet* 51 (Pt 3), 227-33 (1987), was estimated to be 1.60, and the corresponding population attributable risk was 25%.

Thus, the strong association signals from our initial microsatellite association studies helped to focus our attention on the *STRK1* interval and, in particular, to the *PDE4D* gene region.

Table 1.
Microsatellite allelic association analysis of the two-lod drop of the *STRK1* locus. All microsatellites that show association with a p-value less than 0.01 for all stroke, all stroke excluding hemorrhagic stroke, cardiogenic stroke, carotid stroke, small vessel disease and the combination of cardiogenic and carotid stroke

Phenotype	Marker	Allele	p-value	RR	# Aff.	Aff. %	# Ctrl	Ctrl. %
All								
	AC027322-5	10	0.001	3.34	787	1.90	779	0.6
	D5S2121	-2	0.0027	2.19	824	2.7	870	1.3
	AC008818-1	0	0.0045	1.25	815	29.9	891	25.5
All patients - excluding hemorrhagic stroke								
	AC027322-5	10	0.00052	3.56	740	20	779	0.6
	D5S2121	-2	0.0023	2.23	774	2.8	870	1.3
	AC008818-1	0	0.0062	1.24	764	29.9	891	25.5
Cardiogenic stroke								
	AC008818-1	0	0.000054*	1.60	216	35.4	891	25.5
	D5S1990	20	0.00053	2.18	223	7.9	879	3.8
	D5S2089	-10	0.0027	2.22	219	5.9	813	2.8
	D5S1359	2	0.0044	1.39	214	36.0	777	28.8
	AC016604-2	0	0.0048	1.44	170	51.8	446	42.7
	AC008804-1	0	0.0068	1.52	128	36.3	367	27.3
	AC022125-3	0	0.0077	1.36	223	36.8	775	30.0
	DG5S2066	0	0.0095	1.80	166	92.5	501	87.2
	DG5S2039	9	0.0084	2.00	167	8.7	491	4.6
	D5S647	-6	0.0091	2.43	199	3.8	789	1.6
Carotid stroke								
	DG5S397	4	0.00024*	1.70	124	65.7	577	53.0
	DG5S2056	12	0.0009	3.33	80	8.8	464	2.8
	AC008818-1	0	0.001	1.61	125	35.6	891	25.5
	DG5S2039	-3	0.003	1.62	96	45.8	491	34.3
	DG5S2045	0	0.0051	1.80	55	57.3	339	42.6
	DG5S818	6	0.0079	1.50	111	63.1	563	53.3
	AC016604-3	4	0.0072	1.53	99	40.9	645	31.2
Small vessel disease								
	D5S1359	2	0.0085	1.41	157	36.3	777	28.8
	D5S2080	2	0.0092	1.38	153	54.6	885	46.5
	D5S2121	-2	0.0059	2.93	152	3.6	870	1.3
Combined cardiogenic & carotid stroke								
	AC008818-1	0	0.0000015*	1.60	341	35.5	891	25.5
	AC008833-6	0	0.0026	1.35	335	70.3	868	63.8
	DG5S2066	0	0.0032	1.74	258	92.3	501	87.2
	DG5S397	4	0.009	1.29	345	59.3	577	53.0
	D5S2121	-2	0.0081	2.39	336	3.0	870	1.3

*significant after adjusting for multiple testing

Alleles #'s: For SNP alleles A = 0, C = 1, G = 2, T = 3; for microsatellite alleles: the CEPH sample 1347-02 (CEPH genomics repository) is used as a reference, the lower allele of each microsatellite in this sample is set at 0 and all other alleles in other samples are numbered accordingly in relation to this reference. Thus allele1 is 1 bp longer than the lower allele in the CEPH sample 1347-02, allele 2 is 2 bp longer than the lower allele in the CEPH sample 1347-02, allele 3 is 3 bp longer than the lower allele in the CEPH sample 1347-02, allele 4 is 4 bp longer than the lower allele in the CEPH sample 1347-02, allele -1 is 1 bp shorter than the lower allele in the CEPH sample 1347-02, allele -2 is 2 bp shorter than the lower allele in the CEPH sample 1347-02, and so on. Note that this same CEPH sample is a standard that is widely used throughout the world for calibration and comparison of alleles.

AC008818-1 amplimer:

TGCTTGGTGAAGGAATAGCCACCCCAGAGAAGGAGTATGGACTTC TATACACAATCATTCATTCATTCATTCATTCATTCATTCATTCATTC ACTACTCATGCATGATCTTTGTCCTTATCTTCCTCCACTGTCACATGAATA CCCACCCACTGCACCTACCTGCTTCCTATTCCTGAGAACCCAGGCTC (SEQ ID NO: 86)

AC008818-1, allele 0 is the same allele as the minimum allele observed in CEPH 1347-02, family 137, individual 02.

Swedish patients have also been genotyped and microsatellite single and multimarker association has been analyzed using the E-M algorithm. A total number of 943 Swedish patients (stroke patients and patients with carotid stenosis) and 322 Swedish controls were analyzed (results shown in Table 2A). At least three haplotypes were more common in patients compared to controls, confirming in a second population that PDE4D shows association to stroke.

Table 2A
Swedish Patient Association

Markers	Alleles	pAllelic	All Frq Aff	All Frq Ctrl	# aff	# ctrl
Swedish patients (n=943)						
D5S2000	2	0.0024			912	318
(Sw 2) AC022125-3 AC008833-6 D5S2000 D5S2091	0 0 2 0	0.006	0.035	0.01	717	284
(Sw-1) AC008804-2 D17-H D17-G D5S2080	-2 4 -2 10	0.0028	0.057	0.05	672	113
AC008804-2 D17-H D17-G	-4 0 -2	0.0037	0.056	0.03	700	123

Screening for polymorphisms in PDE4D

We next considered whether a functional variant in the *PDE4D* gene might be the cause of our observed microsatellite association. We matched public domain ESTs and our own RT-PCR and RACE transcripts to our sequence of the *STRK1* interval. We defined new alternative PDE4D transcripts, which together with previously known transcripts indicated that the *PDE4D* gene contains 22 exons over at least 1.5 Mb and overlaps with *PART1*. The *PDE4D* gene encodes eight protein isoforms and has at least seven promoters. All isoforms identified have an identical C-terminal catalytic domain but differ at the N-terminal regulatory domain (FIG. 2).

We then attempted to identify mutations by sequencing all known *PDE4D* exons (including the overlapping *PART1* exons) and, on average, 100 bp of their flanking introns in 188 patients and 94 controls. Forty-six polymorphisms were identified; 44 SNPs and two intronic deletions. Only two of the polymorphisms, both SNPs, were found within the coding exons of the *PDE4D* gene, which is consistent with the extraordinary lack of variation that others have reported for all four PDE4 classes Houslay, M.D. & Adams, D.R. PDE4 cAMP phosphodiesterases: modular enzymes that orchestrate signalling cross-talk, desensitization and compartmentalization. *Biochem J* 370, 1-18 (2003). The two coding SNPs were typed for additional patients and controls. However, these SNPs did not show significant association to stroke (Table 2B). Therefore, if a functional variant conferring risk for stroke exists in the *PDE4D* gene, it may be within regulatory regions affecting transcription, splicing, message stability, or message transport of one or more isoforms, or in exons that we have not yet identified.

Table 2B

Frequency of *PDE4D* coding mutations.

Markers	AA change	PDE4D exon	Allele	p-value	Aff. %	Ctrl. %	# Aff	# Ctrl
SNP 250	Pro > Thr	D1/D2	A	0.163	2.0	1.5	604	369
SNP 257	Lys > Thr	4	C	0.381	0.2	0.0	474	294

PDE4D isoform expression

Failing to find a functional mutation in the known coding exons of *PDE4D*, we were interested to consider other possible evidence in favor of this gene being a source of the underlying association in this region. We conducted an experiment to study the expression levels of the various isoforms – with any significant differences between patients and controls potentially indicating that regulation of *PDE4D* is a key element in stroke susceptibility. We used EBV transformed B cell lines from randomly selected patients having ischemic stroke or TIA and from controls. We carried out isoform-specific kinetic RT-PCR analysis to quantify each isoform in 83 stroke patients and 84 controls. The patients were principally ischemic stroke patients, with 32 of them having cardiogenic or carotid stroke. We observed that the total PDE4D message level, as assessed by amplification across exons present in all isoforms (PAN), was significantly lower in patients than in controls (p-value = 0.0021). This decrease was due primarily to lower expression of the PDE4D1, PDE4D2 and PDE4D5 isoforms. This significant disregulation of the expression of multiple PDE4D isoforms greatly encouraged us to continue our investigations into the association of the *PDE4D* gene to stroke.

Table 2C: *SNP identification, single marker association and LD mapping of the PDE4D region*

SNP code	marker or exon	Public name	start in NCBI build 31	end in NCBI build 33	start in SEQ ID NO: 1	end in SEQ ID NO: 1
	AC016604 - 3		57547045	57547304		
	AC016604 - 2		57623148	57623287		
	exon 11		58241020	58241432	1655335	1655747
	exon 10		58242009	58242191	1654576	1654758
	exon 9		58242702	58242824	1653943	1654065
	exon 8		58243543	58243697	1653070	1653224
	exon 7		58254845	58254944	1641818	1641917
	exon 6		58256107	58256271	1640491	1640655
	exon 5		58257156	58257254	1639508	1639606
	exon 4		58258185	58258356	1638406	1638578
	exon 3		58259724	58259817	1636944	1637037
	exon D1/D2		58305211	58305581	1591172	1591425
	exon LF4		58446946	58446995	1449835	1449884
	exon LF3		58451540	58451613	1445217	1445290
	exon LF2		58459851	58459887	1436943	1436979
	exon LF1		58482128	58482319	1414511	1414702
	AC022125 - 3		58504109	58504274	1392556	1392721
SNP 204	SNP5PD890407		58506423	58506423	1390407	1390407
	AC008833 - 6		58507019	58507222	1389608	1389811
	exon D9		58541689	58542470	1354347	1355128
	D5S2000		58585460	58585849		
	D5S2091		58593284	58593634		
	exon D8		58623109	58623414	1273404	1273709
	D17 - C		58645088	58645386	1251432	1251730
	AC008804 - 1		58784449	58784641	1112181	1112373
	AC008804 - 2		58817743	58817931	1078881	1079069
	exon D3		58852680	58852819	1044051	1044190
	D17 - H		58860588	58860725	1036142	1036279
	D17 - G		58942270	58942541	954298	954569
	D5S2080		58998685	58999021		
	exon D5		59034598	59035009	861791	862202
	AC027322 - 5		59159221	59159326	737420	737519
	exon D4		59159520	59160492	736254	737226
SNP 102	SNP5PD166822	rs714291	59229897	59229897		
	exon D7 - 3		59254840	59255069	641649	641878
SNP 101	SNP5PD138604	rs1347401	59258113	59258113	638605	638605
SNP 100	SNP5PD121753	rs1545070	59274962	59274962		
SNP 99	SNP5PD118378	rs1533019	59278338	59278338		
SNP 98	SNP5PD117029	rs952110	59279687	59279687		
SNP 97	SNP5PD104361	rs1995780	59292356	59292356		
SNP 96	SNP5PD97409		59299308	59299308		
SNP 95	SNP5PD97281	rs2016324	59299437	59299437		
SNP 94	SNP5PD75406	rs1396474	59321313	59321313		
SNP 93	SNP5PD73383	rs1508864	59323336	59323336		
SNP 92	SNP5PD72097	rs1508859	59324622	59324622		
	DG5S2045		59325313	59325563	571152	571406
	DG5S2039		59332799	59333077	563636	563921
SNP 91	SNP5PD46864	rs1508863	59349851	59349851		
SNP 90	SNP5PD43868	rs2136203	59352849	59352849		
SNP 89	SNP5PD29517	rs1396476	59367167	59367167		

	DG5S2056		59381102	59381367	515317	515582
	DG5S818		59384776	59384999	511685	511908
SNP 88	SNP5PDM14337	rs1544788	59411021	59411021		
	DG5S397		59438506	59438784	457900	458178
SNP 87	SNP5PDM43741	rs2910829	59440424	59440424		
	exon D7 - 2		59451909	59452039	444645	444775
SNP 86	SNP5PDM57997	rs2962972	59454680	59454680		
SNP 85	SNP5PDM65461	rs2961897	59462144	59462144		
SNP 84	SNP5PDM67604	rs719702	59464287	59464287		
SNP 83	SNP5PDM76361	rs966221	59473045	59473045		
SNP 82	SNP5PDM83539	rs2961903	59480223	59480223		
SNP 81	SNP5PDM89176		59485859	59485859	410826	410826
SNP 80	SNP5PDM89683	rs1862614	59486368	59486368		
	DG5S2066		59522085	59522346	374339	374600
SNP 79	SNP5PDM132154		59528838	59528838	367847	367847
SNP 78	SNP5PDM153120		59549804	59549804	346881	346881
SNP 77	SNP5PDM161561		59558245	59558245	338440	338440
SNP 76	SNP5PDM166786		59563470	59563470	333215	333215
SNP 75	SNP5PDM181173		59577856	59577856	318829	318829
SNP 74	SNP5PDM182792		59579475	59579475	317210	317210
SNP 73	SNP5PDM211974		59608650	59608650	288027	288027
SNP 72	SNP5PDM217886		59614557	59614557	282115	282115
SNP 71	SNP5PDM218639		59615310	59615310	281362	281362
SNP 70	SNP5PDM224528		59621190	59621190	275473	275473
SNP 69	SNP5PDM236461	rs1423248	59633124	59633124		
SNP 68	SNP5PDM259844		59656504	59656504	240157	240157
SNP 67	SNP5PDM261488		59658148	59658148	238513	238513
SNP 66	SNP5PDM265669		59662328	59662328	234332	234332
SNP 65	SNP5PDM271674	rs918590	59668333	59668333		
SNP 64	SNP5PDM275805	rs1423247	59672463	59672463		
SNP 63	SNP5PDM280894	rs789389	59677551	59677551		
SNP 62	SNP5PDM285592		59682247	59682247	214409	214409
SNP 61	SNP5PDM296955	rs37691	59693610	59693610		
SNP 60	SNP5PDM299842		59696497	59696497	200159	200159
SNP 59	SNP5PDM307243	rs37684	59703890	59703890		
SNP 58	SNP5PDM308509	rs2898278	59705155	59705155		
SNP 57	SNP5PDM310220	rs401207	59706866	59706866		
SNP 56	SNP5PDM310653	rs702553	59707298	59707298		
SNP 55	SNP5PDM324741	rs251726	59721387	59721387		
SNP 54	SNP5PDM326519	rs27223	59723165	59723165		
SNP 53	SNP5PDM329913		59726556	59726556	170088	170088
SNP 52	SNP5PDM332989		59729632	59729632	166900	166900
SNP 51	SNP5PDM338487		59735122	59735122	161514	161514
SNP 50	SNP5PDM345627	rs173591	59742248	59742248		
SNP 49	SNP5PDM349039	rs27220	59745661	59745661		
SNP 48	SNP5PDM351840	rs37760	59748461	59748461		
SNP 47	SNP5PDM356081		59752701	59752701	143922	143922
SNP 46	SNP5PDM356447		59753067	59753067	143555	143555
SNP 45	SNP5PDM357221		59753842	59753842	142780	142780
SNP 44	SNP5PDM357245		59753865	59753865	142757	142757
SNP 43	SNP5PDM357445		59754066	59754066	142556	142556
	PART1-exon 1		59754284	59754775		
	exon D7 - 1		59754294	59754415	142207	142328

	PART1-exon 2		59756013	59757617		
SNP 42	SNP5PDM361194	rs153031	59757816	59757816		
SNP 41	SNP5PDM361545		59758341	59758341	138456	138456
	AC008818 - 1	SEQ ID NO: 86	59759882	59760075	136740	136547
SNP 40	SNP5PDM363736		59760357	59760357	136265	136265
SNP 39	SNP5PDM364360	rs3887175	59760981	59760981		
SNP 38	SNP5PDM364848		59761469	59761469	135152	135152
SNP 37	SNP5PDM364888	rs26956	59761510	59761510	135112	135112
SNP 36	SNP5PDM366629		59763250	59763250	133371	133371
SNP 35	SNP5PDM367438	rs26955	59764060	59764060	132562	132562
SNP 34	SNP5PDM368135	rs27653	59764755	59764755	131865	131865
SNP 33	SNP5PDM369610		59766229	59766229	130391	130391
SNP 32	SNP5PDM370640		59767259	59767259	129361	129361
SNP 31	SNP5PDM370641	rs457053	59767260	59767261	129360	129360
SNP 30	SNP5PDM374696	rs27221	59771316	59771316	125304	125304
SNP 29	SNP5PDM376181	rs2963110	59772800	59772800		
SNP 28	SNP5PDM376575	rs35387	59773194	59773194	123426	123426
SNP 27	SNP5PDM376688	rs35386	59773308	59773308	123312	123312
SNP 26	SNP5PDM379372	rs40512	59775992	59775992	120628	120628
SNP 25	SNP5PDM380376		59776995	59776995		
SNP 24	SNP5PDM381086	rs35385	59777706	59777706	118914	118914
SNP 23	SNP5PDM388220	rs26953	59784839	59784839	111781	111781
SNP 22	SNP5PDM388748		59785368	59785368	111252	111252
SNP 21	SNP5PDM388749	rs26954	59785369	59785370		
SNP 20	SNP5PDM390700		59787319	59787319	109301	109301
SNP 19	SNP5PDM392152	rs4133470	59788771	59788771	107849	107849
SNP 18	SNP5PDM392684		59789302	59789302	107317	107317
SNP 17	SNP5PDM394085		59790704	59790704	105792	105792
SNP 16	SNP5PDM394776	rs35384	59791395	59791395	105225	105225
SNP 15	SNP5PDM395449	rs35382	59792068	59792068	104552	104552
SNP 14	SNP5PDM397023	rs26950	59793643	59793643	102977	102977
SNP 13	SNP5PDM399206	rs26949	59795825	59795825	100795	100795
SNP 12	SNP5PDM400966	rs153153	59797585	59797585	99035	99035
SNP 11	SNP5PDM402736	rs152340	59799349	59799349		
SNP 10	SNP5PDM407853		59804468	59804468	92148	92148
SNP 9	SNP5PDM408531		59805145	59805145	91470	91470
SNP 8	SNP5PDM408979		59805593	59805593	91022	91022
SNP 7	SNP5PDM409460		59806074	59806074	90541	90541
SNP 6	SNP5PDM411387		59808001	59808001	88614	88614
SNP 5	SNP5PDM411544	rs27564	59808159	59808159	88456	88456
SNP 4	SNP5PDM416882	rs153152	59813496	59813496	83119	83119
SNP 3	SNP5PDM417756	rs187481	59814371	59814371	82244	82244
SNP 2	SNP5PDM419874	rs152341	59816488	59816488	80127	80127
SNP 1	SNP5PDM421449	rs248911	59818063	59818063	78552	78552
	D5S1990		60945599	60945816		
	D5S1359		63542603	63542894		
	D5S2089		65914315	65914496		
	D5S647		66217674	66218065		
	D5S2121		66584091	66584385		

We next searched for SNPs in the intronic and flanking regions of *PDE4D*. The SNPs were identified in the public NCBI SNP database or by sequencing selected intronic and flanking regions in the gene in at least 94 patients and 94 controls. We initially identified 637 SNPS. Many of these SNPs were completely correlated so we removed many redundant SNPs from further genotyping. Some SNPs with very low minor allele frequencies were also ignored. This resulted in a set of 260 SNPs that were then genotyped for the entire patient and control cohorts. The preponderance of markers with significant associations was located at the 5' end of the gene. One SNP (SNP5PDM76361;SNP83) for carotid stroke and five of the SNPs (SNP5PDM357221=SNP45, SNP5PDM361545=SNP41, SNP5PDM43741=SNP87, SNP5PDM29517=SNP89 and SNP5PDMSNP56) for the combined cardiogenic and carotid stroke remained significant even after adjusting for all the SNPs tested (Table 2D). Three of these significant SNPs flank exon D7-1; the other three are in a 100 kb region containing exon D7-2 (for physical positions see Table 2D). The two most significant SNPs, SNP45 and SNP41, are within 6 kb of the microsatellite marker AC008818-1, and the at-risk alleles of all three genetic markers are in strong linkage disequilibrium with $D' > 0.9$ and p-value nearly zero. The square of the correlation (R^2) is very high between the two SNPs (~ 0.93), but is substantially lower (~ 0.08) between each SNP and the at-risk allele of the microsatellite. This is due to the fact that the frequency of the at-risk alleles of the two SNPs are similar, and much more frequent than that for the at-risk allele of the microsatellite. The LD block structure around the 5' end of PDE4D is displayed in FIG. 13.1. We delineate three blocks A, B and C encompassing the first three exons of *PDE4D* and its immediate downstream region. Exons D7-3 and D7-2 are both in block A, while D7-1 (the first exon) is in block B, but close to its border with block C. Given this block structure we were prepared to investigate the haplotype associated susceptibility to stroke in this region.

Table 2D. All SNPs that show association with a p-value less than 0.01 for all stroke patients, all patients excluding hemorrhagic stroke and the combined cardiogenic and carotid stroke.

Phenotype	Marker	Allele	p-value	RR	# Affect	Aff. %	# Ctrl	Ctrl. %
All patients								
	SNP 32	C	0.00024	1.46	400	37.9	475	29.5
	SNP 56	T	0.0028	1.31	550	71.4	615	65.5
	SNP 45	G	0.0065	1.33	723	82.4	492	78.0
	SNP 48	T	0.0091	1.28	547	68.3	481	62.8
All patients excl. hemorrhagic stroke								
	SNP 32	C	0.00034	1.45	377	37.8	475	29.5
	SNP 56	T	0.0066	1.28	518	70.9	615	65.5
	SNP 45	G	0.0095	1.31	679	82.3	492	78.0
Combined cardiogenic & carotid								
	SNP 45	G	0.000034*	1.77	309	86.3	492	78.0
	SNP 41	A	0.000078*	1.86	236	86.0	368	76.8
	SNP 87	T	0.00019*	1.49	263	58.2	583	48.4
	SNP 89	A	0.00025*	1.84	232	88.8	450	81.1
	SNP 56	T	0.00027*	1.56	230	74.8	615	65.5
	SNP 39	T	0.00032	1.58	326	84.4	589	77.3
	SNP 91	G	0.00047	1.80	233	88.6	451	81.3
	SNP 32	C	0.00069	1.61	144	40.3	475	29.5
	SNP 62	A	0.00089	1.73	153	83.0	556	73.8
	SNP 48	T	0.00080	1.51	229	71.8	481	62.8
	SNP 42	A	0.0018	1.49	259	72.0	403	63.6
	SNP 184	G	0.0025	1.68	252	90.7	570	85.3
	SNP 58	T	0.0042	1.54	234	85.3	569	79.0
	SNP 53	C	0.0041	1.58	146	36.0	269	26.2
	SNP 97	G	0.0046	1.40	225	54.2	450	45.9
	SNP 204	A	0.0049	1.32	334	63.9	651	57.3
	SNP 8	A	0.0054	1.59	228	89.0	612	83.7
	SNP 83	C	0.0074	1.39	223	60.1	349	52.0
	SNP 43	T	0.0093	1.48	243	85.4	550	79.8

* significant after adjusting for multiple testing

Haplotype analysis

Our general approach to haplotype analysis involves using likelihood-based inference applied to NEsted MOdels. The method is implemented in our program NEMO, which allows for many polymorphic markers, SNPs and microsatellites. The

method and software are specifically designed for case-control studies where the purpose is to identify haplotype groups that confer different risks. It is also a tool for studying LD structures.

When investigating haplotypes constructed from many markers, apart from looking at each haplotype individually, meaningful summaries often require putting haplotypes into groups. A particular partition of the haplotype space is a model that assumes haplotypes within a group have the same risk, while haplotypes in different groups can have different risks. Two models/partitions are nested when one, the alternative model, is a finer partition compared to the other, the null model, *i.e,* the alternative model allows some haplotypes assumed to have the same risk in the null model to have different risks. The models are nested in the classical sense that the null model is a special case of the alternative model. Hence traditional generalized likelihood ratio tests can be used to test the null model against the alternative model. Note that, with a multiplicative model, if haplotypes h_i and h_j are assumed to have the same risk, it corresponds to assuming that $f_i/p_i = f_j/p_j$ where f and p denote haplotype frequencies in the affected population and the control population respectively.

One common way to handle uncertainty in phase and missing genotypes is a two-step method of first estimating haplotype counts and then treating the estimated counts as the exact counts, a method that can sometimes be problematic (*e.g.*, see the information measure section below) and may require randomization to properly evaluate statistical significance. In NEMO, maximum likelihood estimates, likelihood ratios and p-values are calculated directly, with the aid of the EM algorithm, for the observed data treating it as a missing-data problem.

NEMO allows complete flexibility for partitions. For example, the first haplotype problem described in the Methods section on Statistical analysis considers testing whether h_1 has the same risk as the other haplotypes $h_2, \ldots, h_k$. Here the alternative grouping is $[h_1], [h_2, \ldots, h_k]$ and the null grouping is $[h_1, \ldots, h_k]$. The second haplotype problem in the same section involves three haplotypes h_1 = G0, h_2 = GX and h_3 = AX, and the focus is on comparing h_1 and h_2. The alternative grouping is $[h_1], [h_2], [h_3]$ and the null grouping is $[h_1, h_2], [h_3]$. The actual problem we faced in FIG. 11.1 is actually slightly more complicated because allele X is a

composite allele that includes five alleles other than allele 0, and hence GX and AX each correspond to five haplotypes. One could have collapsed these alleles into one at the data processing stage, and performed the test as described. This is a perfectly valid approach, and indeed, whether we collapse or not makes no difference if there were no missing information regarding phase. But, with the actual data, each of the 5 alleles making up X correlates differently with the SNP alleles and this provides some partial information on phase. Collapsing at the data processing stage will unnecessarily increase the amount of missing information. What was actually done is natural in the nested-models/partition framework. Let h_2 be split into h_{2a}, h_{2b}, …., h_{2e}, and h_3 be split into h_{3a}, h_{3b}, …, h_{3e}. Then the alternative grouping is [h_1], [h_{2a}, h_{2b}, …., h_{2e}], [h_{3a}, h_{3b}, …, h_{3e}] and the null grouping is [h_1, h_{2a}, h_{2b}, …., h_{2e}], [h_{3a}, h_{3b}, …, h_{3e}]. The same method is used to handle the composite haplotypes in FIG. 11.2 and 11.3 where collapsing at the data processing stage is not even an option since L_C represents multiple haplotypes constructed from 25 SNPs. Here, we also want to mention that, apart from the pair-wise comparisons presented in FIG. 11.1, a 3-way test with the alternative grouping of [h_1], [h_{2a}, h_{2b}, …., h_{2e}], [h_{3a}, h_{3b}, …, h_{3e}] versus the null grouping of [h_1, h_{2a}, h_{2b}, …., h_{2e}, h_{3a}, h_{3b}, …, h_{3e}] could also be performed. Note that the generalized likelihood ratio test-statistic would have two degrees of freedom instead of one. We actually have performed this test and it gave a p-value of 2.4×10^{-7}.

Measuring information

Even though likelihood ratio tests based on likelihoods computed directly for the observed data, which have captured the information loss due to uncertainty in phase and missing genotypes, can be relied on to give valid p-values, it would still be of interest to know how much information had been lost due to the information being incomplete. Interestingly, one can measure information loss by considering a two-step procedure to evaluating statistical significance that appears natural but happens to be systematically anti-conservative. Suppose we calculate the maximum likelihood estimates for the population haplotype frequencies calculated under the alternative hypothesis that there are differences between the affected population and control population, and use these frequency estimates as estimates of the observed

frequencies of haplotype counts in the affected sample and in the control sample. Suppose we then perform a likelihood ratio test treating these estimated haplotype counts as though they are the actual counts. We could also perform a Fisher's exact test, but we would then need to round off these estimated counts since they are in general non-integers. This test will in general be anti-conservative because treating the estimated counts as if they were exact counts ignores the uncertainty with the counts, overestimates the effective sample size and underestimates the sampling variation. It means that the chi-square likelihood-ratio test statistic calculated this way, denoted by Λ^*, will in general be bigger than Λ, the likelihood-ratio test-statistic calculated directly from the observed data as described in methods. But Λ^* is useful because the ratio Λ/Λ^* happens to be a good measure of information, or $1 - (\Lambda/\Lambda^*)$ is a measure of the fraction of information lost due to missing information. This information measure for haplotype analysis is described in Nicolae and Kong, Technical Report 537, Department of Statistics, University of Statistics, University of Chicago, Revised for *Biometrics* (2003) as a natural extension of information measures defined for linkage analysis, and is implemented in NEMO.

Haplotype association

We first considered haplotypes based on the most significantly associated SNPs and microsatellite, SNP45, SNP41 and AC008818-1, which are all in block B and are separated by only 6 kb. Not surprisingly given the high degree of correlation between SNP45 and SNP41, we found that it was sufficient to consider only the two marker haplotypes consisting of the microsatellite and SNP45 – the SNP with the higher genotype yield. The results of this association study for the combination of carotid and cardiogenic stroke are displayed in FIG. 11.1. Note that, for convenience, we have designated by the letter X the joint set of alleles that are not the at-risk allele, 0, of microsatellite AC008818-1. Thus, GX should be understood as the composite of all haplotypes including the G nucleotide of SNP45 except for the G0 haplotype. For our samples, the A0 haplotype does not exist. This suggests that allele 0 originated in a haplotype background with allele G of SNP45, and since then no recombination has occurred between those two markers for chromosomes that carried allele 0. AX, G0 and GX have significantly distinct risks for the

combined carotid and cardiogenic stroke phenotype. We refer to GX as the wild type because it is the most common (53.4% in controls) and also because it has the intermediate level risk that is not too different from the population risk. The haplotype G0 has increased risk and AX is protective, with risks of 1.46 and 0.70 relative to the wild type, respectively. The G0 risk is 2.07 times that of the protective haplotype AX. Each of the three pairwise comparisons is highly significant, with p-values ranging from 0.006 to 7.2×10^{-8}. It is interesting to observe that even though both AX and GX are composite haplotypes, the AX haplotype can be simply summarized by the allele A of SNP45, since the A0 haplotype does not exist. For a similar reason, the G0 haplotype is completely determined by the 0 allele of AC008818-1. Also displayed in FIG. 11.1 is the information content (Info) of each test. The difference between Info and 1 is a measure of the information that is lost due to the uncertainty with phase and missing genotypes. Note that Info is very close to 1 for each of the three tests in FIG. 11.1. That is a result of SNP45 and AC008818-1 being in very strong LD. Note that tests presented later in FIG. 11.2 and 11.3, involving longer haplotypes have lower information content.

We next identified and estimated the risks for the common SNP haplotypes within each block. For this portion of the analysis only those SNPs with minor allele frequency greater than 20% were considered. Block A (300 kb) contained 19 such SNPs, block B (200 kb) 22 SNPs, and block C (60 kb) 25 SNPs. All haplotypes within each block with an estimated frequency in the population of 2% or greater have been identified. Within each block there were fewer than ten such haplotypes, and they accounted for approximately 80% of the total haplotype frequency for that block. A brief schematic of the identified haplotypes are displayed in FIG. 13.2 and the risks and frequencies of these haplotypes are available in Table 3. Within block A no common haplotype has greater risk than SNP87 alone. The strongest signals were for haplotypes in block B and C. Each block contained a haplotype significantly associated with the combination of carotid and cardiogenic stroke and having relative risk around 1.5. The common at-risk haplotype in block B is the SNP background of the G0 haplotype previously identified.

While there were no significant single marker associations in block C, a common haplotype with 15.4% frequency in controls was observed. We designate

this haplotype H_C. Investigation of the contribution of H_C in conjunction with the SNP45 and AC008818-1 haplotypes leads to another interesting observation. For notation, all haplotypes defined by the 25 SNPs in block C that are not H_C are jointly denoted by the composite haplotype L_C. First, it is noted that AX and H_C do not exist together on the same chromosome (see FIG. 11.3), at least in these samples, and thus blocks B and C are far from being independent. As a consequence, the extended composite haplotype AXL_C is the same as AX. The haplotype G0 can be split into the two extended haplotypes G0H_C and the composite G0L_C, which, as indicated in FIG. 11.2, have significantly different risks (p value = 0.0067). Moreover, it appears that the elevated risk of G0 is totally accounted for by G0H_C as G0L_C has risk that is not significantly different from GX = GXH_C + GXL_C (see FIG. 11.2). This observation allows us to refine the haplotype groupings of FIG. 13.1 into the groupings indicated by FIG. 13.3. The extended at-risk haplotype G0H_C (8.8% in controls) and protective composite haplotype AXL_C (21.1% in controls), have, respectively, relative risks of 1.98 and 0.68 compared to the wild type (70.1% in controls). Based on these risk estimates, if everybody's risk can be made to correspond to that of a homozygote carrier of the protective variant, the number of cases would be reduced by 55%, which can be interpreted as the population attributed risk of the at-risk haplotype and the wild type combined.

The at-risk haplotype G0H_C spans a region of about 64kb. While it is possible that the increased risk is due to multiple polymorphisms over that region, the results are also consistent with a relatively recent mutation, as yet to be identified, which occurred in that haplotype background, and since then no recombination has occurred in that extended region for chromosomes carrying the mutation. By contrast, the protective composite haplotype AXL_C can be simply represented by allele A of SNP45. Hence, it is possible that allele A of SNP45 is the functional protective variant, although it is possible that the functional variant is simply in strong LD with allele A of SNP45 and has yet to be identified. Indeed, statistically, the effects of SNP45 and SNP41 are indistinguishable from each other.

Statistical analysis.

For single marker association to the disease, the Fisher exact test was used to calculate two-sided p-values for each individual allele. All p-values were presented unadjusted for multiple comparisons unless specifically indicated. The presented frequencies (for microsatellites, SNPs and haplotypes) were allelic frequencies as opposed to carrier frequencies. To minimize any bias due the relatedness of the patients who were recruited as families for the linkage analysis, we eliminated first and second-degree relatives from the patient list. Furthermore, we have repeated the test for association correcting for any remaining relatedness among the patients, by extending a variance adjustment procedure described in Risch, N. & Teng, J. (*Genome Res.,* 8:1278-1288 (1998)). The relative power of family-based and case-control designs for linkage disequilibrium studies of complex human diseases I. DNA pooling. (*ibid*) for sibships so that it can be applied to general familial relationships, and present both adjusted and unadjusted p-values for comparison. The differences are in general very small as expected. To assess the significance of single-marker association corrected for multiple testing we carried out a randomisation test using the same genotype data. We randomised the cohorts of patients and controls and redid the association analysis. This procedure was repeated up to 500,000 times and the p-value we presented is the fraction of replications that produced a p-value for some marker allele that is lower than or equal to the p-value we observed using the original patient and control cohorts.

For both single-marker and haplotype analyses, relative risk (RR) and the population attributable risk (PAR) were calculated assuming a multiplicative model (haplotype relative risk model), (Terwilliger, J.D. & Ott, J., *Hum Hered,* 42, 337-46 (1992) and Falk, C.T. & Rubinstein, P, *Ann Hum Genet* 51 (Pt 3), 227-33 (1987)), i.e., that the risks of the two alleles/haplotypes a person carries multiply. For example, if RR is the risk of A relative to a, then the risk of a person homozygote AA will be RR times that of a heterozygote Aa and RR^2 times that of a homozygote aa. The multiplicative model has a nice property that simplifies analysis and computations — haplotypes are independent, *i.e.,* in Hardy-Weinberg equilibrium, within the affected population as well as within the control population. As a consequence, haplotype counts of the affecteds and controls each have multinomial

distributions, but with different haplotype frequencies under the alternative hypothesis. Specifically, for two haplotypes h_i and h_j, risk(h_i)/risk(h_j) = $(f_i/p_i)/(f_j/p_j)$, where f and p denote respectively frequencies in the affected population and in the control population. While there is some power loss if the true model is not multiplicative, the loss tends to be mild except for extreme cases. Most importantly, p-values are always valid since they are computed with respect to null hypothesis.

In general, haplotype frequencies are estimated by maximum likelihood and tests of differences between cases and controls are performed using a generalized likelihood ratio test (Rice, J.A. *Mathematical Statistics and Data Analysis*, 602 (International Thomson Publishing, (1995)). deCODE's haplotype analysis program called NEMO, which stands for NEsted MOdels, was used to calculate all the haplotype results presented. To handle uncertainties with phase and missing genotypes, it is emphasized that we do not use a common two-step approach to association tests, where haplotype counts are first estimated, possibly with the use of the EM algorithm, Dempster, (A.P., Laird, N.M. & Rubin, D.B., *Journal of the Royal Statistical Society B,* 39, 1-38 (1971)) and then tests are performed treating the estimated counts as though they are true counts, a method that can sometimes be problematic and may require randomisation to properly evaluate statistical significance. Instead, with NEMO, maximum likelihood estimates, likelihood ratios and p-values are computed with the aid of the EM-algorithm directly for the observed data, and hence the loss of information due to uncertainty with phase and missing genotypes is automatically captured by the likelihood ratios. Even so, it is of interest to know how much information is retained, or lost, due to incomplete information. Described herein is such a measure that is natural under the likelihood framework. For a fixed set of markers, the simplest tests we performed, with results presented in Table 3, compare one selected haplotype against all the others. Call the selected haplotype h_1 and the others $h_2, ..., h_k$. Let $p_1, \ldots, p_k$ denote the population frequencies of the haplotypes in the controls, and $f_1, \ldots, f_k$ denote the population frequencies of the haplotypes in the affecteds. Under the null hypothesis, $f_i = p_i$ for all i. The alternative model we use for the test assumes $h_2, ..., h_k$ to have the same risk while h_1 is allowed to have a different risk. This implies that while p_1 can be different from f_1, $f_i/(f_2+\ldots+f_k) = p_i/(p_2+\ldots+p_k) = \beta_i$ for $i = 2, \ldots, k$. Denoting f_1/p_1 by

r, and noting that $\beta_2+\ldots+\beta_k = 1$, the test statistic based on generalized likelihood ratios is

$$\Lambda = 2\left[\ell(\hat{r}, \hat{p}_1, \hat{\beta}_2, \ldots, \hat{\beta}_{k-1}) - \ell(1, \tilde{p}_1, \tilde{\beta}_2, \ldots, \tilde{\beta}_{k-1})\right]$$

where ℓ denotes $\log_e$likelihood and ˜ and ^ denote maximum likelihood estimates under the null hypothesis and alternative hypothesis respectively. Λ has asymptotically a chi-square distribution with 1-df, under the null hypothesis and it was used to compute p-values presented in Table 3. The tests presented in FIG. 11 have slightly more complicated null and alternative hypotheses. For the results in FIG. 11, let h_1 be G0, h_2 be GX and h_3 be AX. When comparing G0 against GX, *i.e.*, this is the test which gives estimated RR of 1.46 and p-value = 0.0002, the null assumes G0 and GX have the same risk but AX is allowed to have a different risk. The alternative hypothesis allows all three haplotype groups to have different risks. This implies that, under the null hypothesis, there is a constraint that $f_1/p_1 = f_2/p_2$, or $w = [f_1/p_1]/[f_2/p_2] = 1$. The test statistic based on generalized likelihood ratios is

$$\Lambda = 2\left[\ell(\hat{p}_1, \hat{f}_1, \hat{p}_2, \hat{w}) - \ell(\tilde{p}_1, \tilde{f}_1, \tilde{p}_2, 1)\right]$$

that again has asymptotically a chi-square distribution with 1-df under the null hypothesis. There is actually an extra complication to the test due to h_2 and h_3 being composite haplotypes. That is handled in a natural manner under the nested models framework. Other tests presented in FIG. 11.2 and 11.3 were similarly performed.

LD between pairs of SNPs was calculated using the standard definition of D' and R^2 (Lewontin, R., *Genetics* 49, 49-67 (1964) and Hill, W.G. & Robertson, A. *Theor. Appl. Genet.* 22, 226-231 (1968)). Using NEMO, frequencies of the two marker allele combinations are estimated by maximum likelihood and deviation from linkage equilibrium is evaluated by a likelihood ratio test. The definitions of D' and R^2 were extended to include microsatellites by averaging over the values for all possible allele combination of the two markers weighted by the marginal allele probabilities. When plotting all marker combination to elucidate the LD structure in a particular region, we plot D' in the upper left corner and the p-value in the lower right corner. In the LD plots we present the markers are plotted equidistant rather than according to their physical location.

Table 3 Haplotype diversity at the 5'end of the PDE4D gene.

All haplotypes shown that have > 2% population frequency within each of the 3 blocks of strong LD together with the haplotype association results comparing the combination of cardiogenic and carotid stroke versus controls.

Block A:

SNP 102	SNP 101	SNP 100	SNP 99	SNP 98	SNP 97	SNP 96	SNP 95	SNP 93	SNP 92	SNP 90	SNP 88	SNP 87	SNP 86	SNP 84	SNP 83	SNP 82	SNP 81	SNP 80	SNP 79	p-value	Aff %	Ctrl %	RR
T	G	T	A	T	G	A	G	A	G	A	G	T	A	G	C	G	G	T	C	0.0302	26.7	22.2	1.28
C	G	C	A	C	C	G	A	G	A	G	A	C	G	G	C	G	G	T	C	0.366	2.1	2.9	0.73
C	G	C	A	C	C	G	A	G	A	G	A	C	G	A	T	G	G	A	T	0.303	2.6	3.6	0.71
C	G	C	A	C	C	G	A	G	A	G	A	C	G	A	T	A	G	A	T	0.335	22.5	24.5	0.89
C	G	C	G	C	G	A	G	A	G	A	G	T	A	G	C	G	A	A	T	0.216	12.6	10.6	1.23
C	A	C	A	C	C	A	G	A	G	A	G	T	A	G	C	G	A	A	T	0.876	2.2	2.4	0.94
C	A	C	A	C	C	A	G	A	G	A	G	C	A	A	T	G	G	T	C	0.001	6.5	11.2	0.55
C	A	C	G	C	G	A	G	A	G	A	G	T	A	G	C	G	A	A	T	0.401	7.9	6.6	1.20

Block B:

SNP-77	SNP-76	SNP-73	SNP-71	SNP-69	SNP-67	SNP-66	SNP-64	SNP-63	SNP-62	SNP-61	SNP-59	SNP-57	SNP-56	SNP-54	SNP-53	SNP-49	SNP-48	SNP-45	SNP-42	SNP-41	SNP-39	p-value	Aff %	Ctrl %	RR
A	A	T	G	T	A	A	G	A	A	C	A	G	T	A	C	C	T	G	A	A	T	0.0004	29.2	21.4	1.52
A	A	T	G	T	A	A	G	A	C	T	A	A	A	A	T	T	C	A	G	G	A	0.007	4.3	7.6	0.55
G	A	C	A	T	A	A	G	A	A	C	A	G	T	A	C	C	T	G	A	A	T	0.958	2.0	2.1	0.98
G	A	C	A	T	G	G	A	G	A	T	A	A	A	A	T	T	C	G	G	A	T	0.610	6.2	5.6	1.13
G	A	C	A	T	G	G	A	G	C	T	A	A	A	A	T	T	C	A	G	G	A	0.0104	3.4	6.3	0.52
G	G	C	A	T	G	A	G	A	A	C	C	G	T	G	T	C	T	G	A	A	T	0.803	14.6	14.1	1.04

Block C:

SNP 37	SNP 35	SNP 34	SNP 32	SNP 31	SNP 30	SNP 28	SNP 27	SNP 26	SNP 24	SNP 23	SNP 22	SNP 20	SNP 19	SNP 16	SNP 15	SNP 14	SNP 13	SNP 12	SNP 6	SNP 5	SNP 4	SNP 3	SNP 2	SNP 1	p-value	Aff %	Ctrl %	RR
T	A	A	C	C	A	C	G	A	A	C	T	T	A	T	T	G	A	A	T	T	T	G	A	A	0.0006	22.2	15.4	1.58
G	A	A	C	C	A	C	G	A	A	T	C	C	G	C	C	G	A	G	C	A	T	C	A	A	0.533	2.2	2.8	0.78
G	A	A	C	C	A	C	G	A	A	T	C	C	G	C	C	G	A	G	T	T	T	G	A	A	0.24	3.0	2.0	1.52
G	A	A	C	C	A	C	G	A	T	T	C	T	A	C	C	A	G	G	C	A	C	C	T	G	0.302	2.6	1.8	1.46
G	G	C	T	T	C	C	G	A	A	C	T	T	A	T	T	G	A	A	T	T	T	G	A	A	0.258	2.0	3.0	0.68
G	G	C	T	T	C	C	G	A	A	T	C	C	G	C	T	G	A	G	C	A	T	C	T	G	0.0078	7.8	12.0	0.62
G	G	C	T	T	C	G	A	G	T	T	C	T	A	C	C	A	G	G	C	A	C	C	T	G	0.781	32.9	33.6	0.97

Allelic definitions and polymorphisms for SNPs in the two most significant haplotypes (in block B and C).

The analysis presented above represents a conservative analysis of the data since it restricted the analysis to SNPs with minor allelic frequencies of greater than 20%. To further understand the magnitude of the contribution of PDE4D to stroke in this 5 prime region, we repeated the analysis without such restrictions, including all SNPs selected for genotyping. We found a SNP haplotype for the two major subtypes of ischemic stroke, carotid and cardiogenic stroke (Table 3, Block C). This is a 5 SNP haplotype that covers an area of 48 kb and is just upstream of the 5'exon covering the presumed promoter region of isoform PDE4D7. It captures the same information as the 0 allele for marker AC008818-1. However, the SNP haplotype is more specific in the sense that it has a higher relative risk, *i.e.*, 2.3. This haplotype is carried by 47% of the patients and has the same population attributable risk (PAR) of 0.25. The polymorphisms and alleles for the SNPs are presented in Table 4A.

Table 4A

SNP Name	Public name if available	Polymorphism	Position	Allele (nucleotide)
SNP42 SNP5PDM361194	rs153031	A/G	138806	0 (A)
SNP34 SNP5PDM368135	rs27653	C/A	131865	0 (A)
SNP32 SNP5PDM370640	rs456009	C/T	129361	1 (C)
SNP26 SNP5PDM379372	rs40512	G/A	120628	0 (A)
SNP9 SNP5PDM408531	(new)	G/A	91470	0 (A)

Table 4B

Phenotype	SNP42	SNP34	SNP32	SNP26	SNP9	p-value	# Affect	Aff. Freq.*	# Ctrl	Ctrl. Freq*	R-risk	PAR	info
All stroke	A	A	C	A	A	2.17E-05	988	0.19	652	0.12	1.8	0.16	0.604
Cardiogenic/ carotid	A	A	C	A	A	3.37E-07	313	0.236	652	0.119	2.3	0.25	0.616

- allelic frequency

The sequences for the microsatellite markers are as follows:

AC008879-2 amplimer:

ACAAAGAGCACCTTTCCAGTGGACAACTAACTAAAGTGGTGTGATTTTGG TATAAGTTTGTGTGTGTGTGTGTGTGTGTGTTGTGTGTGTGTATGTGTA TACATTTAGTTTTATTGTAACAAAGCAACTTGTACTTTTCACGTTTAAAA (SEQ ID NO: 85)

* AC008879-2, allele 0 is the same allele as the minimum allele observed in CEPH 1347-02, family 137, individual 02.

In summary, this single SNP haplotype (which is only one haplotype of the several found above but is probably the most tightly associated to stroke) more than doubles an individual's risk for cardiogenic and carotid stroke and accounts for 25% of such strokes in Iceland. The other haplotypes described above provide additional risk for stroke. The magnitude of this risk haplotype is comparable or higher than the well-known clinical risk factors for stroke such as hypertension, diabetes, hyperlipidemia, and smoking.

These SNPs show strong association in patients with cardioembolic and large vessel disease.

Table 5 and Table 6 show previously known microsatellite markers and novel microsatellites in sequence. Forward and reverse primers are shown.

Table 5 Previously Known microsatellite markers in sequence

	Accession number	Forward primer	SEQ ID NO.	Reverse primer	SEQ ID NO.
D5S2107	GDB:614475	AGCCTTTGGGCCAACA	15	CAAACCAACAGGAGTATGTACTTTT	16
D5S468	GDB:593646	AAATGAATGGTAGATTTAACCTGAG	17	TGGGAAAATAAATACATGCG	18
D5S2000	GDB:608769	TTATACCAGGAGAGTAGACTTTTTT	19	CATGCTAATTTCAAATATGAGAG	20
D5S2091	GDB:613806	GCATTTGTCATGTGCCA	21	GGTATTTCATTCACAGCCAGTC	22
D5S2500	GDB:683034	TTAAAGGAGTGATCTCCCCC	23	GTTACAGTACCTATGGTCATGCC	24
D5S2080	GDB:613188	GCACTGTGAATTTCAAATG	25	GTCAGGGGACTGGGAT	26
D5S2018	GDB:609957	CCTGTAAACAATGAAAACCCACTGA	27	AGACTATGCTGTGTGTGTGCCTG	28
D5S2071	GDB:612756	TCTGGGTTTACAACCTTCAAA	29	TAACTGGCTTGGCCCG	30

Table 6 Novel microsatellites in sequence:

	Forward primer	SEQ ID NO.	Reverse primer	SEQ ID NO.
DG5S382	CAGTAAATAGTTTGCTTCAGGCATT	31	CTCATACTCTGCGTGGCTTG	32
AC008829-5	AGGGCTAAGTGGATCACAGC	33	AGAGGGTCTTGCCACTGTGT	34
AC008833-2	TCTGCAAGACTCTCGGTGCT	35	TGCAGATCTCATATTTCCATGTTT	36
AC008833-3	TCTGCCCTTTGTTCCTCATC	37	GTCAAGGGAGTGATGGCAGT	38
AC022125-3	AAAATGACTGCCTCCCACAA	39	GGGAAATCATACTGCCCTCA	40
AC008833-6	AAACATAGCCACCCTGTTGC	41	TCCAAAGCCCTTAGCTTAATCA	42
D17-C	GCTCCCTGGACTGTGGTAAA	43	GCCACATTGCTGTCACATTT	44
D17-B	TTTTTCAGGGCTGGGTAGAA	45	TCCAAAGGAAGTGAAATCAGTG	46
D17-D	CTAACCCATCCTCACCCAAT	47	TGTGGCATACAGGGAAGTGA	48
AC008804-1	GTGCTGGAATTTGGCTCCTA	49	CAAACATCATTTTGCCTTGC	50
AC008804-2	TCCCAAACGATAGCTGTTGC	51	GAATTAGGACGGTGGCTCAA	52
AC008804-3	TTTGCATTCATCACTCATTCG	53	CCCGTAGCATCTGATCCAGT	54
D17-H	AGAAAGCTTCCCCTCCACTG	55	CATTCCAGCCTGAGCTACAA	56
D17-G	TGGGCTCCAATTATCCTTCC	57	TGCAGTTTGCACTCTCCTTG	58
AC027322-12	TTATCTGTTCCCCATGCTTTT	59	TGTTACATCTTGATCTATGACGTTT	60
AC027322-10	TGTATCCTGCATCCCTTGTT	61	GGAATAACCCAAAAGTAATTGTAGTGA	62
AC027322-9	TCGTGCCAAGATGAAAATGA	63	AAACCTCCCTGATCATCTGAA	64
AC027322-8	ACAGAGGAGCAAAGGAATCA	65	TTGGCACGAATCACTCTCTG	66
AC027322-3	CCCCATTTGGATGATGGTAA	67	TGAGAACATCTAACGTCTTTTTCAA	68
AC027322-5	GGCACAGATAACTGGGAAGC	69	CCCCCAAAAGTACTGCATAAA	70
DG5S397	ATGTTGGCATTTGGTGAGGT	71	CACCTGTCCCTTTGGAGGTA	72
AC008879-2	TTTTAAACGTGAAAAGTACAAGTTGC	73	ACAAAGAGCACCTTTCCAGTG	74
*AC008818-1	TGCTTGGTGAAGGAATAGCC	75	GAGCCTGGGTTCTCAGGAAT	76
**AC008879-3	GGCAAGAACAGTTTGGAGGA	77	GACTGCTGTTTGCTGGTTGA	78
AC020733-1	AAATGGCTATAAAGTGCTTTGAAC	79	CGGTCTCAACAACCAGAACA	80
AC016591-2	CAGAAACACACAGAAGTCATTCAA	81	CAGACCCAATTAATGGCAAAA	82
DG5S405	TCTGTCTTCTTTGACCCATGAAT	83	CAACACAGCGAGACCTCATC	84

* Product Size 194, tetranucleotide repeat

** Product Size 150; dinucleotide repeat

Table 7

Correlation between at-risk alleles for markers AC008818-1, SNP45 and SNP41.

Estimates of LD (correlation) between the at-risk alleles, allele 0 for marker AC008818-1, allele G for SNP45 and allele A for SNP41, the three most significant disease associated genetic markers.

A. Combined cardiogenic and carotid patients

		Frequency	AC008818-1	SNP 45 (R^2)	SNP 41 (R^2)
	AC008818-1	0.355		0.090	0.076
D'	*SNP 45*	0.863	1		0.943
	SNP 41	0.860	0.906	0.981	

B. Controls

		Frequency	AC008818-1	SNP 45 (R^2)	SNP 41 (R^2)
	AC008818-1	0.255		0.091	0.078
D'	*SNP 45*	0.780	1		0.920
	SNP 41	0.768	0.924	0.968	

Table 8

Association of risk factors.

Association of microsatellite AC008818-1 at-risk allele 0, SNP45 allele A and haplotype G0H_C respectively with various risk factors.
Cases are stroke patients with risk factors and controls are stroke patients without the risk factors. P-values are two-sided.

	AC008818-1 : Allele 0					SNP45 : Allele A					Haplotype G0H_C				
	Cases with risk factor		Cases without risk factor			Cases with risk factor		Cases without risk factor			Cases with risk factor		Cases without risk factor		
	N	Frq.	N	Frq.	P-value	N	Frq.	N	Frq.	P-value	N	Frq.	N	Frq.	P-value
Hypertension	477	0.303	203	0.303	1.000	416	0.172	181	0.188	0.510	503	0.134	216	0.123	0.634
Hyper-cholesterolemi	274	0.336	312	0.271	0.025	242	0.216	277	0.186	0.516	287	0.153	329	0.104	0.026
Diabetes	93	0.274	424	0.310	0.379	79	0.196	398	0.176	0.422	100	0.127	455	0.133	0.857
Peripheral artery occlusive	133	0.297	357	0.305	0.815	116	0.181	340	0.176	0.921	138	0.121	388	0.132	0.697
Coronary artery disease	179	0.302	429	0.318	0.588	153	0.170	406	0.182	0.662	181	0.122	467	0.141	0.444
Early onset (< 68)	349	0.294	462	0.304	0.137	314	0.186	430	0.173	0.538	380	0.128	506	0.125	0.876
Males vs females	457	0.291	358	0.310	0.414	420	0.181	303	0.168	0.575	489	0.122	370	0.141	0.315

Discussion of Stroke Gene Identification

Genealogy, a comprehensive population-based list of broadly defined stroke patients and non-parametric allele sharing methods have been combined to successfully map a major gene to chromosome 5 for one of the most complex diseases known. We then used a large case-control association study that showed that PDE4D is the gene in this location that is the gene conferring substantial risk for stroke. This is the first gene ever mapped and isolated for the common forms of stroke. There was no correlation

between the contribution of the families to this gene location and hypertension, diabetes or hyperlipidemias and this gene does not match any known gene contributing to these risk factors. The types of stroke studied in this work do not reflect a rare or Icelandic-specific form of stroke; rather, the diversity of the stroke phenotypes in Icelanders as well as risk factors are similar to those of most other Caucasian populations (Agnarsson, U., *et al., Ann. Intern. Med., 130*:987 (1999); Eliasson, J.H., *et al., Læknablaðið, 85*:517-25 (1999); Sveinbjörnsdottir, S., *et al.*, Systematic registration of patients with Stroke and TIA admitted to The National University Hospital, Reykjavik, Iceland, in 1997, XIII. Meeting of the Icelandic Association in Internal Medicine, Akureyri, Iceland (Valdimarsson, E.M., *et al., Læknabladid 84*:921 (1998)).

The magnitude of the risk and the frequency of the disease haplotypes in the general population confirm that we have mapped a gene for the common forms of stroke and not some rare form of stroke. This gene almost doubles one's risk for stroke in general, and more than doubles one's risk for the two most common subtypes of stroke, carotid and cardiogenic stroke. In addition, the most common disease haplotype has a population attributed risk of 25% (which means it accounts for 25% of the patients) and there are other haplotypes that we describe herein that are less common that accounts for other patients. Thus PDE4D is a major cause of stroke and its relative risk rivals those of hypertension, smoking, diabetes, and hyperlipidemia. PDE4D shows tighter correlation to the forms of stroke dependent on atherosclerosis (carotid and cardiogenic stroke) and it is expressed in cell types known to be important for atherosclerosis such as vascular smooth muscle cells, macrophages, and endothelial cells. This suggests that the strong effect that PDE4D variation has on stroke risk is through its role in the vascular biology of atherosclerosis (see discussion at the end of the examples). Example 2 details our sequencing of the entire PDE4D gene and the definition of its exon-intron structure based on new and old cDNAs, and Example 3 shows that the expression pattern of PDE4D isoforms correlates with a stroke associated haplotype.

EXAMPLE 2: SEQUENCING AND CHARACTERIZATION OF THE HUMAN GENE AND ITS RNA/PROTEIN ISOFORMS

Sequence of the Stroke Gene Region

At the start of our work, there was little genomic sequence available in the public domain covering the stroke gene region. Therefore, we sequenced approximately 3 Mb of the area defined by one drop in lod. The locus on 5q12 indicated in the genome wide scan was physically mapped using bacterial artificial chromosomes (BACs). A set of overlapping clones for a 20 cM region was assembled through a combination of hybridization and BAC-fingerprint walking. Eighteen BACs (bacterial artificial clones) (RP11-164A5, RP11-188I15, RP11-313P15, RP11-631M6, RP11-103A15, RP11-489L13, RP11-621C19, RP11-113C1, RP11-567M18, RP11-412M9, RP11-151G2, RP11-151F7, RP11-281M3, RP11-421L6, RP11-1A7, RP11-68E13, RP11-379P8, and RP11-422K3) covering the minimum tiling path of the one LOD interval were analysed using shotgun cloning and sequencing. Dye terminator (ABI PRISM BigDye) chemistry was used for fluorescent automated DNA sequencing. ABI prism 377 sequences were used to collect data and the Phred/Phrap/Consed software package in combination with the Polyphred software were used to assemble sequences (See Table 9A and 9B) Publicly available sequences (AC008836, AC073546, AC021603, AC008498, AC016435, AC021601, AC016591, AC008818, AC008879, AC008934, AC011929, AC027322, AC008111, AC020924, AC026693, AC012315, AC08804, AC008791, AC020975, AC008833, AC008829, AC022125, AC008790, AC026095, AC066693, AC008852, AC016642, AC034250, AC025179, AC08814, AC008926, AC010391, AC016635 and AC016604) from this region were assembled with the obtained sequence and a 3.7 Mb sequence (with 22 gaps) was generated. Comparison of the current public human assembly (NCBI BUILD 33) to our sequence of the STRK1 locus only showed a minor discrepance.

The BAC clones we sequenced are from the RCPI-11 Human BAC library (Pieter deJong, Roswell Park). The vector used was pBACe3.6. The clones were picked

into a 94 well microtiter plate containing LB/chloramphenicol (25 µg/ml)/glycerol (7.5%) and stored at -80°C after a single colony has been positively identified through sequencing. The clones can then be streaked out on a LB agar plate with the appropriate antibiotic, chloramphenicol (25 µg/ml)/sucrose (5%).

Table 9A

Sequenced at Decode (BAC name)	**Comment**	**Accession number**
RP11-621C19	1	AC020733
RP11-113C1	2	
RP11-412M9	2	
RP11-151G2	2	
RP11-151F7	2	
RP11-281M3	2	
RP11-421L6	2	
RP11-68E13	2	
RP11-379P8	2	
RP11-1A7	1	AC008111
RP11-422K3	2	

Key to "Comment" column:
1= This BAC has a publicly available sequence,
it was sequenced at Decode to make sure the sequence was correct
2= Only BAC end-sequence available for this BAC publicly.

Table 9B

Sequences available from GenBank (BAC name)	**Accession number**	**Status of sequence**
RP11-621C19	AC020733	17 unordered pieces
CTD-2003D5	AC016591	complete sequence
CTD-2210C1	AC008879	7 unordered pieces
CTD-2124H11	AC008818	complete sequence
CTD-2301A11	AC008934	complete sequence
RP11-16B11	AC011929	7 unordered pieces
CTC-261E10	AC026693	complete sequence
CTD-2027G10	AC027322	complete sequence
RP11-1A7	AC008111	8 unordered pieces
CTD-2122K7	AC012315	complete sequence
CTD-2085F10	AC008804	complete sequence
CTD-2040J22	AC008791	complete sequence
RP11-235N16	AC020975	16 ordered pieces
CTD-2146O16	AC008833	complete sequence
CTD-2084I4	AC022125	17 ordered pieces
CTD-2140K22	AC008829	26 ordered pieces
CTD-2124D11	AC020924	7 ordered pieces
RP11-731H6	AC026095	21 unordered pieces

PDE4D Gene; Identification of New Exons and Splice Variants

The gene, human cAMP specific phosphodiesterase 4D (HPDE4D) was identified in the sequenced region by BLAST of our novel genomic sequence with the cDNAs/EST databases from GenBank. In addition, we ran RT-PCR reactions and 5 prime and 3 prime RACE reactions using cDNA libraries generated from a variety of tissues including human aorta. The primer sites used corresponded to known or exons predicted from our genomic sequence using Genscan, and Fgene. We found several novel cDNAs and matched them to the 3Mb sequence in and around PDE4D. The genomic sequence covering all known and novel exons in PDE4D so far is approximately 1,550,000 bases in length.

We defined new alternative transcripts which together with previously known transcripts showed that the *PDE4D* gene contains 22 exons over at least 1.5 Mb and overlaps with the *PART1* gene whose transcript is on the other strand at the 5' end. The *PDE4D* gene has at least 7 promoters and encodes 8 protein isoforms. All isoforms have an identical C-terminal catalytic domain but differ at the N-terminal regulatory domain. Six of the 8 forms are so called long isoforms. Each of them have unique N-terminal regulatory domains but they are all characterized by two highly conserved regions found in all PDE4 subfamilies, *i.e.* upstream conserved regions 1 and 2 (UCR 1 and 2). The six long forms differ from each other by unique alternative 5 prime exons which predicts six alternative promoters that are each upstream of the corresponding 5 prime exon. The remaining two are the so-called short forms, variants that lack the UCR 1 (Houslay, M.D. & Adams, D.R., *Biochem J*, 370, 1-18 (2003)). The five previously known isoforms are encoded by 17 exons distributed over a segment of 0.9 Mb.

The three new exons D7A-1, D7A-2 and D7A-3 are spliced to one another and together splice onto exon LF1 forming the splice variant we named PDE4D7 (FIG. 3). Exon D7-1 is non-coding. Exons D8 and D9 are spliced by themselves onto exon LF1 forming two splice variants we named PDE4D8 and PDE4D9, respectively (FIG. 3).

In terms of genomic structure, the D7A exon extends the 5' end of PDE4D by 590,000 bp, and the D8 and D9 exons lie between exons D3 and LF1(physical position of exons presented in Table 2C). The new PDE4D7 isoform has an open reading frame extending into LF1, resulting in additional 91 amino acids at the N-terminus of the predicted protein. The D8 and D9 5′ exons contain a long 5' UTR, followed by an ATG near the end of the exons that extends an ORF into LF1 resulting in a novel N-terminal segments of 22 and 30 amino acids in the PDE4D8 and PDE4D9 predicted proteins, respectively. The new splice variants were verified by RT-PCR on different cDNA tissue panels and subsequent cloning and sequencing of the products.

The *PDE4D* gene encodes at least eight different isoforms. Six of the eight forms are the so-called long isoforms. Each of them has an unique N-terminal regulatory domain but they are all characterized by two highly conserved regions found in all PDE4 subfamilies, *i.e.,* upstream conserved regions 1 and 2 (UCR 1 and 2). The remaining two isoforms are the short forms, variants which lack the UCR 1.

Three PDE4D isoforms have been submitted to GenBank by Memory Pharmaceuticals on September 16, 2002 and December 17, 2002, under accession numbers AF536975 (isoform named PDE4D6), AF536976 (named PDE4D7) and AF536977 (named PDE4D8). See also PCT WO 01/00851, published January 4, 2001. The sequence AF536977 corresponds to our earlier reported PDE4D6 isoform and AF536976 corresponds partly to our earlier reported PDE4D7 isoform, however the first untranslated exon we named D7-1 is missing from this sequence. The sequence AF536975 is a new short PDE4D isoform. We have therefore changed the isoform names accordingly herein as follows: PDE4D6 is now called PDE4D8, PDE4D7 is now called PDE4D7 and PDE4D8 is now called PDE4D9. We have submitted the new PDE4D splice variants, PDE4D7 and PDE4D9 to GenBank (Accession numbers AY245866 and AY245867, respectively).

We have in addition identified 17 putative exons upstream of LF1, based on ESTs, mouse homologies and GeneMiner exon predictions. Primers designed from these exons were used in conjunction with primers from LF1 and exon3 for RT PCR in the hope of identifying novel exons. Novel exons were in turn used to design primers for various RT-PCR reactions. We also used 5'RACE primers, designed from the known exons upstream of LF1. We have to date identified 14 new exons, including exons belonging to UniGene Cluster Hs.343602 that have now been connected to LF1.

For the 5' RACE reactions we used cDNA made from heart, SkNAS (neuroblastoma cell line) and HVAEnd 5050 (endothelial cell line). For RT-PCR reactions a number of cDNAs made of total RNA were used (see below)

Novel exons in Table 10A are in italics; previously know PDE4D exons in white. Exon 3 of EST AW272330 is included on the table as a representative of the 3' of ESTs from UniGene cluster Hs 343602.The positions given are from SEQ ID NO: 1. Note the different splicing of 4D9-3.2, 4D9-3.1, and AW272330exon3.

Total RNA was isolated from HeLa, SkNAs and Jurkat 77 cell cultures according to manual, using the TRIZOL® reagent provided by GibcoBRL. We used the GeneRacer™, ThermoZyme™ and TOPO TA cloning® (containing pCR®2.1-TOPO®) kits from Invitrogen following the manufacturer's protocol.

Table 10A

exon #	EXON	SEQ ID 1	SEQ ID 1	supported by EST(s)
1	*4D7-A*	108127	108217	Yes
2	PDE4D7-1	142207	142328	*PDE4D*
3	*4D7-4*	257650	257705	Yes
4	*4D7-8*	288224	288393	No
5	*4D7-B*	295203	295251	No
6	*4D7-5*	352169	352317	No
7	*4D7-6*	441914	442036	No
8	PDE4D7-2	444645	444775	*PDE4D*
9	*4D7-C*	482438	482719	No
10	*4D7-7*	597399	597534	Yes
11	*4D7-9*	626020	626092	No
12	PDE4D7-3	641649	641878	*PDE4D*
13	PDE4D4	736254	737226	*PDE4D*
14	PDE4D5	861791	862202	*PDE4D*
15	PDE4D3	1044051	1044190	*PDE4D*
16	*4D9-1*	1069544	1069629	Yes
17	*4D9-2*	1069936	1069993	No
18	*4D9-3.2* *4D9-3.1* *AW272330exon3*	1071661 1071668 1071668	1071795 1071795 1071901	Yes
19	*4D9-4*	1121821	1121892	No
20	*4D9-5*	1247621	1247696	No
21	PDE4D8	1273404	1273709	*PDE4D*
22	PDE4D9	1354347	1355128	*PDE4D*
	LF1exon	1414511	1414702	*PDE4D*

Sequence of New Exons:

>4D7-A
GGCCTCGAGCAGAACTTCCCATTTGAGTGGGACCAAGAAGAGCATACAAAG
CTGAAATGTTCTCCAGAAGTTGATTTCCAATGGGGATAAA (SEQ ID NO: 88)
>4D7-4_From Forward Primer
TGATTACAGGTTTTAGAGAAGAGGAACAATGCTTCCTCTGAGCCTGAAGAA
AAGAA (SEQ ID NO: 89)

>4D7-8
AGTTCTGACCATGTCCTGTGTCACTCTCAAGCAGAGATTGAAAATGACATTC
GTCCTTTACTTGTTCCAAGGAAGCAAACATTTTATAGTTTGAAACTGTTTCTC
TTGCATTTGCTTTGCAAGAGGTTTGCAGAAGTTAAGCCTCATGGAGTCTTCTC
TCCTTAACTTAA (SEQ ID NO: 90)
>4D7-B
TGTGAAGAATTTGGAAATTGCAAGGAGCATGGGAAGGAGATGATTTGGG
(SEQ ID NO: 91)
>4D7-5
GAATGAAGAGGAAATCAAGACATACTTAGATAAAAACAGATTATCACCAGG
AGATCTGCTGTAAAAGAATGGCTAAAGGAAGTTAGCTAAGCAGAAAGGAAG
TAACATAAAAAGGAACCTTGGAACATCAGGGAGGACAAAAGAACATG (SEQ
ID NO: 92)
>4D7-C
TTTCTCTTTCTCCAATCACTCACTCTGGAGGCAGCTAGCTGTCAACTCACAAA
GACACTCAAGCAGCCTATGGAAGAAGGCCACATGGTAAAATATGGAGGCCT
CCAGCCAACAGTCAGCAAGGAACTGAGACAAGTCAACAACCATGTGAGTGA
CTCGAGAAGTGCTTCTCTAGCTCCAGTTGAGACTTGCAGTAGCAGCAGCCTC
AGCTGGCGGCTTGACTGCAATCTCTTGAGAGACCCTAAGCTCTCCTGAATTC
TTGATCCTTAGAAACTGTGTGAG (SEQ ID NO: 93)
>4D7-6
GGTCTAGCTGTGTCCCAGAGAGCAACTTCCCTTTTCAAGGCAGCCCACTCTG
TGTGATGCTTTTTCCTAGGTATGGGCAACCCATCCCTCCTAGGGTGAAAACT
TCGCTGTTGCTAGTTCCAG (SEQ ID NO: 94)
>4D7-7
AATGATGCCGTATTATTCTCCTGACCTAACTTCAAAGAAATAAAGAGTTTGC
AAGAAGAACTGCAGTTCTTCAAAGTACGCAATATGGATTTCCAAGATGAAT
GTAGTTTCTCTCTCTGAGGAATTCTGAACAGTG (SEQ ID NO: 95)
>4D7-9
GACTTGAGCATCTGAAGATTTTGGTTTCTGCAGAGGGTGGGAAAGGTTGAAC
CAATCCCCCATGGATACCAAG (SEQ ID NO: 96)
>4D9-1
GGCTTTCCAGATCCCTGAAGATAAAATACAAACTCTCCAACAAGACCTTT
TGGCCATCAGGAACGCAGCACCTGGCTCTCTCACTA (SEQ ID NO: 97)
>4D9-2
AAAGTCGCAGAGATAGCGGAGAACAAGAACCAGATCTCACAGTCATGGTGC
CAAAAGA (SEQ ID NO: 98)
>4D9-3.1
CTGTTACCCTAGCATGACTGCTTCAGCGAAGAGATAAGAGCTTCTTTGACTT
TTTCCACTGGAATTTTTCATGCCAGAAGAAATTGAACATGTGAGCCTGGTGT
CTGGAAGAGTAGCCTGGATTTATG (SEQ ID NO: 99)
>4D9-3.2

AATTCAGCTGTTACCCTAGCATGACTGCTTCAGCGAAGAGATAAGAGCTTCT
TTGACTTTTTCCACTGGAATTTTTCATGCCAGAAGAAATTGAACATGTGAGC
CTGGTGTCTGGAAGAGTAGCCTGGATTTATG (SEQ ID NO: 100)
>4D9-4
TTCCTTGATAGTTCCAATATCTGTAATCTTGTTGGTCTACCTGTGCAGTTTAT
TCCACTGATTGTCTCTCAG (SEQ ID NO: 101)
>4D9-5
GCGAAAATACTGAGGCTCAACAGACATAAAATGGCTTGAGTTACCAGGCTA
CAGTAGAACTAGGATTTCAGTCCAG (SEQ ID NO: 102)

Splicing of the Exons as identified by RT-PCR/RACE
New exons are in italics.

RT4D7: 4D7-1 + 4D7-2 + 4D7-3 + LF1
RT1: 4D7-1 + *4D7-8* + 4D7-2 + 4D7-3 + LF1
RT2: *4D7-4* + 4D7-2 + *4D7-9* + 4D7-3 + LF1
RT3: 4D7-2 + 4D7-3 + LF1
RT4: 4D7-1 + 4D7-2 + *4D7-7* + 4D7-3 + *4D9-1* + *4D9-3.1*
RT5: 4D7-1 + 4D7-2 + 4D7-3 + *4D9-2* + *4D9-3.1*
Race6: *4D7-A* + *4D7-B* + 4D7-2 + *4D7-C* + 4D7-3
RT7: 4D7-1 + *4D7-4*
RT8: 4D7-1 + *4D7-5* + 4D7-2
RT9: 4D7-1 + *4D7-6* + 4D7-2
RT10: *4D9-1* + *4D9-3.1* + LF1
RT11: *4D9-2* + *4D9-3.2* + LF1
RT12: *4D9-3* + *4D9-4* + LF1
RT13: *4D9-3* + *4D9-4* + *4D9-5* + LF1
RT14: *4D9-3* + LF1

Detection of variants in cDNA from various tissues:

Table10B

	RT4D7	RT1	RT2	RT3	RT4	RT5	RT6	RT7	RT8	RT9	RT10	RT11	RT12	RT13	RT14
Bone Marrow	-	-	-	*	-	-	n	n	n	n	n	-	-	-	-
Brain	+	-	-	*	-	-	n	n	n	n	n	n	-	+	-
fetal Brain	+	-	-	*	-	-	n	n	n	n	n	n	-	-	-
colon	+	+	-	*	-	-	n	n	n	n	n	n	-	-	-
Heart	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
HVAEend 5050	-	-	n	n	n	n	+	-	-	-	+	+	n	n	+
Kidney	+	-	+	+	-	-	n	n	n	n	n	n	-	-	-
Liver	-	-	-	*	-	-	n	n	n	n	n	-	-	-	-
Placenta	-	-	-	*	-	-	n	n	n	n	n	-	-	-	-
Prostate	+	-	-	*	+	-	n	n	n	n	n	n	-	-	*
Salivary gland	+	-	-	*	-	-	n	n	n	n	n	n	-	-	-
Skeletal Muscle	-	-	-	-	-	-	n	n	n	n	n	n	+	-	+
SkNAS cell line	+	-	n	*	n	n	-	+	+	+	-	-	n	n	-
Spinal Cord	-	-	-	-	-	-	n	n	n	n	n	n	-	-	*
Spleen	-	-	-	*	-	-	n	n	n	n	n	n	-	-	+
Testis	-	-	-	-	-	-	n	n	n	n	n	n	-	-	*
Thymus	+	-	-	*	-	-	n	n	n	n	n	n	-	-	-
Thyroid	+	-	-	*	-	+	n	n	n	n	n	n	-	-	+
Trachea	+	-	-	*	-	-	n	n	n	n	n	n	-	-	-
Uterus	-	-	-	-	-	-	n	n	n	n	n	n	-	-	+
other#	-	-	-	-	-	-	n	n	n	n	n	n	-	-	-

+ = present and verified by sequencing

* = product of the correct size present; not yet verified by sequencing

- = not detected

n = not checked

These are: Adrenal Gland, Fetal Liver, Cerebellum, Lung, Small Intestine.

Two of the variants that are more widely expressed appear to be mutually exclusive: 4D7 [with 4D7-1 as first exon] was detected in 10 cDNAs while RT14 is found in 9cDNAs. Of these thyroid and prostate are the only tissues common to both variants.

The 13 new RT and RACE variants presented above (we had previously described the 4D7 variant), do not add any new translated sequence. The RT1 product is expected o be the same as the 4D7 putative protein. In variants RT2 and Race6 the exons between 4D7-2 and 4D7-3 interfere with the ORF with the first AUG and ORF being just inside LF1. Similarly Exon 4D9-3 contains stop codons in all 3 reading frames and Variants RT10, 11,12,13, and 14 having their ATG initiation codon inside LF1. It is not clear whether variants RT4 and RT5, which contain exon 4D9-3 extend to LF1 or have their 3' at 4D9-3 (the latter possibility is supported by the EST data).

It is noteworthy that all variants except 4D7, RT3 and RT14 have been observed only in one of the cDNAs. Although all the new exons (except 4D9-3.1) have an AG/GT splice signal, it is plausible that these variants represent rare or aberrant events with little physiological significance.

The following exons contain Alu repetitive element sequences: 4D7-5 and 4D7-C. The gene specific reverse (3′) primer was designed for PDE4D exon LF1 (5' GGCAATGGAGGAGTTCCGGGACA TA-3'; SEQ ID NO: 87 origin from Homo sapiens).

A contig for the incomplete genomic sequence of the PDE4D gene was submitted by others in November 2000 (GenBank entry NT_023193 by International Human Genome Project collaborators). The size of the contig is 614 481 bp (including gaps) whereas our novel genomic sequence for the whole PDE4D region (*i.e.,* from the first exon for PDE4D variant) is close to 1,690,000 bp and contains no gaps. The contig NT_023193 comprises only 11 exons of the PDE4D gene (in FIG. 3, exons 4D1/D2 - 11) and the 5' differently spliced exons are missing in the contig (in FIG. 3, exons D4, D5, D3, D8, D9, D7A-1, D7A-2, D7A-3, LF1, LF2, LF3 and LF4).

Table 13: New Isoforms

Isoform Name	Exon		Size	Cell line
PDE4D7	D7-1	5'	122 bp	SKNAS
PDE4D7	D7-2	Internal	131bp	SKNAS
PDE4D7	D7-3	Internal	230 bp	SKNAS
PDE4D9[1]	D9	5'	782 bp	HeLa

[1] Formerly referred to in previous applications as PDE4D8

The sequences are as follows:

D7A-1:
ATAGTTGGCGTACCCTGAGGCCTGCCAGTTCCTGCCTTAATGCATATGTAGTCGTAATTGAGTTCTGACACGGCCTTGGATGTTTCTGTCCTAAATAGCTGACATTGCATCTTCAAGACTGT

D7A-2:
CATTCCAGTTGGCTTTTGAGTGGATACGTGCAGTGAGATCATTGACACTGGAAACACTAGTTCCCATTTTAATTACTTAAAACACCACGATGAAAAGAAATACCTGTGATTTGCTTTCTCGGAGCAAAAGT

D7A-3:
GCCTCTGAGGAAACACTACATTCCAGTAATGAAGAGGAAGACCCTTTCCGCGGAATGGAACCCTATCTTGTCCGGAGACTTTCATGTCGCAATATTCAGCTTCCCCCTCTCGCCTTCAGACAGTTGGAACAAGCTGACTTGAAAAGTGAATCAGAGAACATTCAACGACCAACCAGCCTCCCCCTGAAGATTCTGCCGCTGATTGCTATCACTTCTGCAGAATCCAGTGG (SEQ ID NO: 11; includes D7A-1, D7A-2 and D7A-3)

New predicted amino-terminal protein sequence from above (PDE4D7):

MKRNTCDLLSRSKSASEETLHSSNEEEDPFRGMEPYLVRRLSCRNIQLPPLAFRQLEQADLKSESENIQRPTSLPLKILPLIAITSAESS (90 amino acids) (SEQ ID NO: 12)

D9:
TTCTCACTGCCCTGCGGTGTTTTGAACTGCCTTCTTACAGACGTCATACAGCCCTTGAGGAATAGTTTCTGCCTGGTGAGATTGAATGATAGTTCTCATTCACAAAACCCTGGATTCTAAGCAGGGACACACAGAAATTACTTTCGCAGGTAAATCAGCCCACCCAGCCAAAGTGTGGAGAGATTTGTTCCTTGGCTGACTTCTTTGC

TCCACGGAGAGGAGTGTTTTCCTGTGCTTGCCCTGAAATGGAACTTCCTTGA
CAGCTCTCCCGTGTTACAGTACCTCCCGGTCATTTTCTTTTTCTCTCTCTCTAC
CTGCGCTCTTCGAGTGTCAGAAACCTTTAAAGCTGTTACTATGGAATTGCAA
AAAAGAGATCAAGTGACTCTTTCACTATGCTGGTTTCCCTTGTGACCCAGAT
GAAGAATCAATTCAGAATTCAGTTCCTCCCTTGGCATTGCAAGACACAGAAG
AAACTGTCACTTCCTAACAGCCTAGTACTGGAGTAAATTCAGTATGAAGGAA
GAAAGCGCTCCTGCGTGTTAGAACCTTGCCCATGAGCTGGACCGAGGACAG
GAGATGGACTCCAGGAAAATTGGATTTCTTCAAGCAGCCTCCCTTGGAAATG
GAATATCTTTAAAATCTTCTTTGCAGAAAGACAGTTAGAATGTATTAATCAG
AATAGTTGAAGACTTATTTTCCTTTTTATTTTTTTTCAAAATGAGCATTATTAT
GAAGCCAAGATCCCGATCTACAAGTTCCCTAAGGACTGCAGAGGCAGTTTG
(SEQ ID NO: 13)

New predicted amino-terminal protein sequence from above (PDE4D9):

MSIIMKPRSRSTSSLRTAEAV (21 amino acids) (SEQ ID NO: 14).

Table 11

Publically Available SNPS; SNP ID No. from NCBI Database

rs286155	rs27960	rs27221	rs149079	rs789615	rs37708
rs286156	rs27564	rs27653	rs149324	rs401207	rs37709
rs2061250	rs27565	rs26955	rs153067	rs364917	rs789389
rs286150	rs26948	rs26956	rs40354	rs404202	rs1423247
rs206789	rs40131	rs153031	rs26951	rs440607	rs874768
rs1823062	rs26949	rs185190	rs153029	rs411255	rs2042315
rs1823063	rs26950	rs37762	rs27223	rs615429	rs918590
rs1445852	rs26954	rs37761	rs27222	rs789396	rs918591
rs766119	rs26953	rs1423471	rs251726	rs37684	rs918592
rs956721	rs152324	rs27224	rs1862589	rs1445893	rs1115372
rs248910	rs35385	rs1645013	rs702556	rs37685	rs1345782
rs248912	rs40512	rs1423472	rs702554	rs1086121	rs1363862
rs187481	rs35386	rs27220	rs441391	rs42222	rs1423248
rs153152	rs35387	rs1423473	rs446883	rs37707	rs1423246

rs1862614	rs1995780	rs1435077	rs159624	rs1008709	rs298088
rs2194256	rs1508865	rs1369287	rs1159470	rs1027747	rs298087
rs889305	rs952110	rs1017410	rs159622	rs869685	rs1421401
rs2113071	rs1533019	rs1017409	rs256349	rs869686	rs298086
rs2113072	rs2117552	rs1435076	rs256348	rs924880	rs298085
rs966220	rs1545069	rs1435075	rs1501640	rs1504983	rs298084
rs966221	rs1545070	rs1435074	rs600611	rs1504982	rs298083
rs719702	rs973700	rs978455	rs159621	rs877745	rs298073
rs2113073	rs1583434	rs1827340	rs159625	rs877744	rs298072
rs2113074	rs1347401	rs1393083	rs1435072	rs2164661	rs298071
rs2113075	rs1949017	rs988364	rs173945	rs981230	rs1421400
rs1035512	rs723962	rs1017408	rs256356	rs1437124	rs402874
rs1559277	rs1355099	rs2053155	rs185351	rs746477	rs434368
rs1981848	rs1396473	rs181923	rs256355	rs893191	rs371011
rs1544788	rs1369285	rs1546364	rs2067024	rs1992112	rs298063
rs1544790	rs1435071	rs173942	rs256354	rs298102	rs298062
rs1544791	rs1435070	rs159616	rs173944	rs298101	rs298061
rs851284	rs1435083	rs159620	rs256353	rs2164660	rs298060
rs1396476	rs991551	rs1501641	rs986400	rs298100	rs298057
rs1508860	rs1154790	rs159619	rs1504981	rs298098	rs298056
rs1974850	rs1154789	rs159614	rs1120533	rs298096	rs1370230
rs2136203	rs714291	rs159613	rs256351	rs298095	rs297975
rs2174994	rs981760	rs159612	rs190458	rs298094	rs297974
rs1508863	rs1369288	rs159611	rs256352	rs298093	rs379578
rs1508859	rs977418	rs194368	rs171745	rs1362942	rs920190
rs1508864	rs977417	rs661576	rs1157709	rs1362941	rs1865962
rs1396474	rs977416	rs299627	rs1910790	rs298091	rs298018
rs1543951	rs1529843	rs159608	rs1910789	rs298090	rs298021
rs2016324	rs1529842	rs159609	rs1504985	rs298089	rs298022

rs298023	rs2053229	rs296406	rs697076	rs37575	rs1824154
rs298024	rs295974	rs296405	rs294478	rs37576	rs2112911
rs298025	rs295973	rs295948	rs953302	rs1876209	rs1551564
rs298026	rs295972	rs295947	rs294479	rs190486	rs2034895
rs298027	rs295971	rs295946	rs697075	rs447261	rs2081092
rs298028	rs295970	rs295945	rs294481	rs1506558	rs2112910
rs298029	rs295969	rs295944	rs294482	rs1108916	rs918583
rs298030	rs295968	rs1395334	rs294483	rs921942	rs1840838
rs169868	rs295966	rs295943	rs702545	rs924998	rs1350298
rs177077	rs726652	rs1035321	rs294484	rs176705	rs1990985
rs298032	rs295965	rs294494	rs294485	rs1156029	rs1379297
rs298033	rs1307218	rs722923	rs294486	rs1156028	rs1817248
rs298034	rs1307217	rs294495	rs702544	rs931857	rs244569
rs298035	rs893190	rs294496	rs702543	rs931856	rs244568
rs298042	rs1111495	rs294497	rs159194	rs931855	rs244567
rs298044	rs295961	rs294498	rs40215	rs1506557	rs244565
rs298045	rs295960	rs294499	rs291118	rs462930	rs185417
rs298046	rs295959	rs294500	rs1506560	rs458953	rs258128
rs298048	rs295958	rs294501	rs37569	rs174039	rs258127
rs298049	rs296410	rs294503	rs291119	rs2174624	rs258125
rs298050	rs295957	rs295936	rs37571	rs2135480	rs1348710
rs298051	rs295956	rs1395336	rs1870077	rs992726	rs1348709
rs298052	rs295955	rs1395337	rs159195	rs294474	rs1971061
rs298053	rs295954	rs294492	rs37572	rs294475	rs1541673
rs190936	rs295949	rs159196	rs37573	rs988827	rs1541672
rs298017	rs295980	rs159197	rs167161	rs988828	rs258112
rs298016	rs295979	rs172362	rs37574	rs1350297	rs258111
rs298015	rs295978	rs37579	rs1506562	rs1457110	rs171800
rs298014	rs1154587	rs721784	rs291122	rs1457111	rs187716

rs258110	rs424839	rs1118965	rs35266	rs255652	rs26709
rs258109	rs370891	rs154028	rs39672	rs255650	rs26710
rs258108	rs434183	rs151802	rs958851	rs255649	rs28055
rs258107	rs444552	rs244580	rs244576	rs2194210	rs26711
rs665836	rs433565	rs1457145	rs244575	rs255648	rs27723
rs392901	rs1445918	rs244579	rs244573	rs255647	rs27185
rs383444	rs441817	rs255812	rs35258	rs154221	rs27695
rs662643	rs433161	rs154029	rs35259	rs256752	rs1445954
rs670169	rs428059	rs185333	rs40121	rs256120	rs27549
rs525099	rs434422	rs35289	rs35261	rs255635	rs455969
rs669240	rs427433	rs35288	rs35264	rs185325	rs26712
rs381755	rs391377	rs35287	rs40122	rs26686	rs1867711
rs454702	rs414746	rs35286	rs35265	rs1031197	rs1867712
rs443191	rs187368	rs35285	rs35255	rs1031198	rs26713
rs380118	rs244593	rs35284	rs721826	rs27183	rs26714
rs2168649	rs244592	rs35283	rs244570	rs28044	rs27547
rs371775	rs244591	rs35282	rs27171	rs27182	rs26715
rs378970	rs244590	rs35281	rs1824159	rs545611	rs27949
rs401013	rs181736	rs35280	rs27170	rs649476	rs26700
rs427748	rs193447	rs35279	rs27169	rs1664896	rs1306348
rs427740	rs2028842	rs35278	rs27168	rs149106	rs35309
rs378869	rs2028841	rs40126	rs2013979	rs1374028	rs27691
rs1902609	rs1823068	rs35277	rs889231	rs531105	rs35310
rs389324	rs1823067	rs35276	rs2014012	rs27184	rs26689
rs387647	rs1823066	rs35275	rs37353	rs1445951	rs27187
rs377451	rs244588	rs40125	rs187645	rs1947090	rs1445948
rs403695	rs168641	rs35274	rs1809012	rs26708	rs26687
rs403672	rs2059175	rs244577	rs187644	rs2112959	rs166260
rs372309	rs2059174	rs35267	rs153981	rs1445953	rs149506

rs27722	rs1664886	rs1559251	rs1553113
rs26695	rs1867724	rs1345791	rs1353748
rs27773	rs1445947	rs1345792	rs1498606
rs1471429	rs42470	rs1345793	rs1353747
rs1471430	rs1423308	rs1105577	rs1006431
rs26705	rs27174	rs1960	rs1948651
rs28054	rs168834	rs1824788	rs1498605
rs26703	rs27727	rs1862563	rs1498604
rs27898	rs27172	rs1551939	rs1498603
rs722010	rs676449	rs1038080	rs1995166
rs27957	rs27186	rs997421	rs1498602
rs26702	rs2112957	rs1014317	rs1077183
rs27548	rs1023814	rs2059191	rs1078368
rs26701	rs27175	rs1551938	rs1874857
rs27188	rs1445950	rs1186170	rs1874858
rs27189	rs2021384	rs986067	rs1909294
rs149084	rs736736	rs954740	rs1546221
rs153968	rs745813	rs1363882	rs2055295
rs464787	rs889229	rs1353749	rs1391648
rs153978	rs1077978	rs1391651	rs2055298
rs464311	rs2081106	rs1391650	rs1472456
rs149108	rs1559252	rs1391649	rs1553114
rs153980	rs2054443	rs1391652	rs1542842
rs153961	rs922437	rs950446	rs1498611
rs1867725	rs922436	rs950447	rs1532520
rs153965	rs922435	rs1498599	
rs153966	rs922434	rs1498601	
rs1988803	rs716908	rs1498609	
rs467300	rs1971940	rs1498608	

Table 12

New SNPs identified by deCODE

Position	Variation	AA Change	Exon
135641	T/A		
142780	A/G		
732790	G/T		
735966	C/A		
736226	A/G		
736516	C/T		
850001	G/A		
852776	A/C		
853079	G/T		
853575	C/A		
856468	A/G		
860845	A/G		
870924	A/G		
1027267	T/C		
1027643	T/G		
1027757	T/C		
1028146	T/A		
1037657	A/C		
1044016	G/A		
1044045	C/T		
1254737	T/C		
1254849	T/C		
1255763	G/T		
1257206	A/G		
1258161	T/C		
1268007	A/G		
1268187	C/T		
1268553	A/G		
1272669	G/A		
1272910	A/G		
1273023	G/A		
1273220	A/G		
1273240	A/G		
1273543	C/T		
1288439	G/A		
1289730	T/A		
1290176	G/A		
1293745	T/C		
1344605	A/G		
1344864	G/A		
1345135	C/G		
1345286	A/G		
1346112	C/T		
1352976	A/T		
1354291	T/C		
1354377	C/T		
1354554	C/A		
1354675	T/C		
1355114	T/C		
1355693	A/G		
1357081	A/G		
1362985	T/G		

1363021	C/T		
1363827	C/T		
1363911	G/A		
1364061	C/T		
1364066	T/A		
1367904	A/G		
1368193	T/C		
1368217	G/C		
1373349	C/T		
1373384	A/G		
1373415	T/C		
1373979	T/G		
1376149	G/A		
1384931	A/C		
1385093	A/T		
1385107	G/A		
1385445	T/C		
1391418	G/C		
1409210	C/A		
1414804	C/T		
1428284	T/C		
1431800	A/T		
1449904	A/T		
1574301	C/G		
1574615	C/T		
1575634	A/T		
1580088	G/A		
1581078	G/A		
1582418	T/A		
1584580	A/C		
1585955	G/T		
1590608	T/C		
1590672	A/G		
1590673	G/T		
1590837	G/A		
1590936	C/A		
1591011	G/A		
1591047	C/T		
1591306	C/A	Pro->Thr	D1
1591583	T/C		
1594788	C/A		
1594994	G/A		
1601831	C/T		
1636902	T/C		
1638550	A/C	Lys->Thr	exon 4
1640663	T/C		
1641954	C/T		
1641960	C/T		
1653881	G/A		
1655748	G/A		
91470	G/A		

Discussion of Example 2:

Here we present the first complete genomic sequence of human PDE4D, two novel mRNA/protein isoforms of PDE4D and their corresponding exons, and the intron-exon structure of known and novel isoforms. The basis for phosphodiesterases is the mammalian homolog of the "dunce" gene in *Drosophila melanogaster*, implicated in learning and memory (Davis, R.L. and B. Dauwalder, *Trends Genet., 7(7)*:224-229 (1991)). PDEs are members of a large superfamily of isoenzymes subdivided into 9 and possibly 10 distinct families (Conti, M. and S.L. Jin, *Prog. Nucleic Acid Res. Mol. Biol., 63*:1-38 (1999)), with several genes in each family and more than one isoform for each gene. The significance of the diversity of PDEs is not known but many of the isoforms differ in their biochemical properties, phosphorylation, intracellular targeting, protein-protein interactions and patterns of expression in tissues, which suggests that each of the various isoforms might have distinct functions (Bolger, G.B., *Cell Signal, 6(8)*:851-859 (1994); Conti, M., *et al., Endocr. Rev., 16(3)*:370-378 (1995)).

There are four genes that encode the type 5 PDEs (PDE4A, PDE4B, PDE4C and PDE4D), which is a group of enzymes characterized by high affinity for cAMP. The gene for PDE4D was assigned to human chromosome 5q12 (Milatovich, A., *et al., Somat. Cell Mol. Genet., 20(2)*:75-86 (1994); Szpirer, C., *et al., Cytogenet. Cell Genet., 69(1-2)*:22-14 (1995)) and 5 distinct splice variants have been characterized (the short forms PDE4D1, PDE4D2 and the long forms PDE4D3, PDE4D4, and PDE4D5) (Bolger, G.B., *et al., Biochem. J., 328(Pt.2)*:539-548 (1997)) (FIG. 3). The sequence of the human PDE4D variants show a high degree of homology to the PDE4Ds expressed in mouse and rat. The pattern of splicing and different promoter usage is highly conserved during evolution indicating an important physiological role (Nemoz, G., *et al., FEBS Lett., 384(1)*:97-102 (1996)). The PDE4D variants are generated at two major boundaries present in the gene. The first boundary corresponds to the junction of exon 2. Differential splicing in this region generates the 2 short variants PDE4D1 (586 a.a.)

and PDE4D2 (508 a.a.) (FIG. 3). This splicing boundary is conserved in mouse, rat and between different human PDE4 genes. The splicing variant PDE4D2 is generated by the removal of 256 bp from the PDE4D1 sequence. The initiation codon in the PDE4D2 variant lies within exon D1/D2. Data demonstrates that the expression of the short PDE4D variants is under the control of an internal promoter regulated by cAMP (Vicini, E. and M. Conti, *Mol. Endocrinol., 11(7)*:839-850 (1997)). The second major splicing boundary is also conserved during evolution and is identical to that described in the *Drosophila* dunce gene. Splicing occurs at the intron/exon boundary at the LF1 exon (FIG. 3).

PDE function

The PDEs serve at least four major functions in the cell. They can (1) act as effector of signal transduction by interacting with receptors and G-proteins; (2) integrate the cyclic nucleotide-dependent pathway with other signal transduction pathways; (3) function as homeostatic regulators, playing a role in feedback mechanisms controlling cyclic nucleotide levels during hormone and neurotransmitter stimulation; (4) play an important role in controlling the diffusion of cyclic nucleotides and in creating subcellular domains or channeling cyclic nucleotide signaling (Conti, M. and S.L. Jin, *Prog. Nucleic Acid Res. Mol Biol., 63*:1-38.(1999)). Inhibition of PDE has long been recognized as an effective pharmacological strategy to alter intracellular cyclic nucleotide levels (Flamm, E.S., *et al., Arch. Neurol., 32(8)*:569-71 (1975)).

It has been reported that PDE4 is the predominant isozyme regulating vascular tone mediated by cAMP hydrolysis in cerebral vessels (Willette, R.N., *et al., J. Cereb. Blood Flow Metab., 17(2)*:210-9 (1997)).

A recent study on mice with targeted disruption of PDE4D gene (Hansen, G., *et al., Proc. Natl. Acad. Sci. U S A, 97(12):*6751-6 (2000)) has demonstrated a crucial role of PDE4D in the control of smooth muscle contraction and muscarinic cholinergic receptor signaling but not in the control of airway inflammation. The lung phenotype of the PDE4D-/- mice demonstrates that this gene plays a nonredundant role in cAMP

homeostasis. There is a significant reduction in PDE activity and an increase in resting and stimulated cAMP levels in the lung, indicating that other PDE4s (or other PDEs) are not up-regulated and cannot compensate for the loss of PDE4D. These findings support that PDE4D serves a unique, nonoverlapping functions in cell signalling.

No clear link between an established inherited disorder and known PDE loci has emerged, with the exception of PDE6. Inhibitors of PDEs have been shown to affect airway responsiveness and pulmonary allergic inflammation (Schudt, C., *et al., Pulm. Pharmacol. Ther., 12(2)*:123-9 (1999)). There are reports suggesting that altered PDE4 function may be linked to nephrogenic diabetes insipidus (Takeda, S., *et al., Endocrinology, 129(1)*:287-94 (1991)) or atopic dermatitis (Chan, S.C., *et al., J. Allergy Clin. Immunol., 91(6)*:1179-88 (1993)), however no mutations have been identified. It has also been reported that vasorelaxation modulated by PDE4 (not mentioned whether it is A, B, C or D gene family) is compromised in chronic cerebral vasospasm associated with subarachnoid hemorrhage (Willette, R.N., *et al., J. Cereb. Blood Flow Metab., 17(2)*:210-9 (1997)). PDE4D itself has not been linked to stroke before.

PDE4D expression and cellular localization

PDE4Ds are expressed in human peripheral mononuclear cells (Nemoz, G., *et al., FEBS Lett, 384(1)*:97-102 (1996)), brain (Bolger, G., *et al., Mol. Cell Biol., 13(10)*:6558-71 (1993)), heart (Kostic, M.M., *et al., J. Mol. Cell Cardiol., 29(11)*:3135-46 (1997)) and vascular smooth muscle cells (Liu, H. and D.H. Maurice, *J. Biol. Chem., 274(15)*:10557-65 (1999)).

Immunoblotting of rat brain has shown that the PDE4D3, PDE4D4 and PDE4D5 proteins are present in brain (Bolger, G.B., *et al., Biochem. J., 328(Pt 2)*:539-48 (1997)) and are expressed in cortex and cerebellum from rat (Iona, S., *et al., Mol. Pharmacol., 53(1)*:23-32 (1998)). These proteins were recovered mostly or exclusively in the particulate fraction suggesting that these forms may be targeted to insoluble cellular structures. In addition a 68 kDa protein was detected which could represent PDE4D1, PDE4D2 or both. To verify this RT-PCR was performed on mRNA from rat brain and

the results showed that transcripts for PDE4D1 and 2 were present. Their data also suggests that the N-terminal regions of the PDE4D3-5, derived from alternatively spliced regions of their mRNAs, are important in determining their subcellular localization activity and differential sensitivity to inhibitors and there are indications that there is a propensity for the long PDE4D isoforms to interact with particulate fraction of the cell.

EXAMPLE 3: PDE4D ISOFORM EXPRESSION

Expression analysis in EBV transformed B cell lines

As a functional mutation in the known coding exons of *PDE4D* was not identified, gene expression was next studied to determine if the genetic association to stroke relates to regulation of its expression levels. In order to test this, we chose to use cell lines instead of blood or tissues for these studies because expression analysis of cell lines is not confounded by the presence of multiple cell types. Cell types may express *PDE4D* at different levels so it is generally more reliable to quantify expression in cell lines than tissues. Isoform-specific kinetic PCR analysis was carried out on EBV transformed B cell lines to quantify each isoform in 83 stroke patients and 84 controls. These patients were not selected for this analysis based on any specific subtype of stroke. The majority of the patients had ischemic stroke and 38% of them had carotid or cardiogenic cause of stroke. Overall the total PDE4D message level as assessed by amplification across exons present in all isoforms (PAN), was significantly lower in patients than in controls (p value < 0.005). This decrease was due primarily to lower expression of the isoforms, PDE4D1, PDE4D2 and PDE4D5 (FIG. 4).

We selected individuals with a specific stroke associated haplotype and compared the expression levels of carrier vs. non-carriers of this haplotype and with patients and controls examined separately (FIGS. 5 and 6). The haplotype was constructed out of the at-risk allele for the microsatellite marker AC008818-1 and SNP45 (SNP5PDM357221) and SNP41 (SNP5PDM361545). This haplotype acts as a

surrogate for the disease-associated haplotype we have identified in LD block B (Table 3). Patients with the haplotype had a significantly decreased expression of the PDE4D7 and PDE4D9 isoforms (FIG. 5). Several other isoforms of PDE4D were expressed but did not show correlation to the disease haplotype. The PDE4D7 correlation was also present in controls but only marginally significant (FIG. 6). Of interest, this at-risk haplotype covers the 5' exon specific to PDE4D7 and presumably its promoter.

These results show that there is significant disregulation of the expression of multiple PDE4D isoforms in stroke patients.

Methodology for expression analysis using Quantitative Reverse Transcriptase PCR

Total RNA was isolated from EBV transformed B-cell cultures according to manual, using the TRIZOL® reagent provided by GibcoBRL. RNeasy mini Qiagen kit with on column DNA digestion was used to clean RNA. Quality and quantity of RNA was assessed using 2100 Agilent Bioanalyser. cDNA was prepared from total RNA using random hexamers with TaqMan Reverse Transcription Reagents kit from Applied Biosystems (N808-0234). Primer Express 2.0 and Oligo 6 software were used to make cDNA specific primers and probes for PDE4D and PDE4D isoforms. GAPDH "Assay-On-Demand" was obtained from Applied Biosystems and used as a housekeeping gene. PDE assays were tested and optimized for 384 well high throughput expression analysis using ABI 7900 Instrument. A final concentration of 200 nM probes, 900 nM primers and 2 ng/mcl cDNA was used in a 10mcl reaction volume. Each plate was run twice and an average for each sample calculated. ABI7900 instrument was used to calculate CT (Threshold Cycle) values. Samples displaying a greater than 1 deltaCT between duplicates were not used in our analysis. Quantity was obtained using the formula $2^{-\Delta CT}$ where ΔCT represents the difference of CT values between target and housekeeping assay.

Accession numbers AY245866 (PDE4D7) and AY245867 (PDE4D9).

Discussion of the three examples and conclusions:

Our results indicate that genetic variation in the *PDE4D* gene is associated with ischemic stroke. The direct involvement of *PDE4D* is strongly supported by linkage in conjunction with association and expression analysis. We first identified the association using microsatellite markers, and supplementing the microsatellite data with a denser set of SNPs further supported this. The strongest association is to the two ischemic subtypes, carotid and cardiogenic stroke whereas we did not observe association to small vessel occlusive disease, the form of stroke thought to be independent of atherosclerosis. Although we have not identified a functional mutation in the *PDE4D* gene, we have identified a haplotype, that extends over the first exon of *PDE4D* that is significantly associated to carotid and cardiogenic stroke. This haplotype is present in 47% of the carotid/cardiogenic stroke patients, compared to 21% in the control group with more than two-fold stroke risk for the carriers of this haplotype. It has a population attributed risk of 25%. For the combined cardiogenic and carotid subtype of stroke, apart from finding individual SNP and microsatellite alleles that are significantly associated with the disease even after adjusting for multiple comparison, most interesting is the discovery that haplotypes covering the first exon of *PDE4D* can be classified into three groups with clearly distinct risks. Relative to the protective group, the population attributed risk of the at-risk and wild type groups combined is estimated to be 55%. Approximately 16% of the population carries one copy of the at-risk haplotype in FIG. 12.3. They have about 1.8 times the risk of the general population for getting cardiogenic or carotid stroke. Approximately 0.8% of the population is homozygous for the at-risk haplotype and, assuming the multiplicative model, their risk is estimated to be about 3.8 times the risk of the general population. It is true that we have not yet identified or proved convincingly what is the functional variant, or variants, which are responsible for the observed effects of these haplotype groups. And, since these haplotype groups do not fully explain the linkage signal we observe in the region for all stroke patients, we certainly could not rule out, and indeed expect, that there are other variants/haplotypes within *PDE4D* not directly related to those we have identified that

confer risk to stroke. These are likely to be rare but could have very high penetrance. We also cannot rule out the possibility that some other genes in the linkage region independent of, or in conjunction with, *PDE4D* confer susceptibility to stroke.

We examined whether the disease associated alleles and haplotype are related to specific stroke risk factors such as hypertension, hypercholesterolemia, diabetes, peripheral artery occlusive disease and coronary artery disease in addition to each onset of stroke and gender (Table 8). A marginally significant association to hypercholesterolemia was observed but it is clear that PDE4D's contribution to stroke is not strongly correlated with any of these known risk factors.

The *PDE4D* gene is a highly complex gene. By alternative splicing and use of different promoters this gene generates at least 8 different isoforms that yield functional proteins, differing from each other in their N-terminal regions. We have identified four new exons encoding the N-termini of two new isoforms PDE4D7 and PDE4D9. The disease-associated haplotype extends over the 5'exon unique to the new PDE4D7 variant and the presumed promoter region of this isoform suggesting that the functional variation may be involved in transcriptional regulation. This hypothesis is also supported by our PDE4D expression analysis that shows significant correlation between the disease associated haplotype and the level of PDE4D7 message.

The strongest association found for this *PDE4D* haplotype was to the two major subtypes of ischemic stroke, carotid and cardiogenic stroke, suggesting a role for this gene in the vascular biology of atherosclerosis. While there are multiple etiologies for ischemic stroke, atherosclerosis remains the most important one and it is the major pathological process for the two ischemic subtypes, carotid and cardiogenic strokes. First, it is the major cause of stenotic and occlusive lesions of the internal and common carotids that lead to carotid strokes. Second, cardiac thrombi which shed emboli to the brain most commonly occur on the background of coronary artery disease, such as following acute myocardial infarction or ischemic cardiomyopathy, and/or due to atrial fibrillation on the basis of poor compliance of ischemic ventricles (diastolic dysfunction/stiffening). Although atrial fibrillation may occur on the background of

other diseases such as valvular disease, hyperthyroidism, and hypertension, in the age group that tends to suffer from stroke, ischemic heart disease remains one of the most important causes. Ischemic stroke resulting from occlusion of small penetrating arteries within the brain (small vessel occlusive disease or lacunar stroke) is generally thought to result from endothelial proliferation since atherosclerosis only occurs in larger arteries. PDE4D does not show association to small vessel stroke, consistent with its role in atherosclerosis. Carotid and cardiogenic stroke together account for the majority of ischemic stroke (note that our number for carotid is lower since we used a more stringent cutoff of stenosis).

PDE4D selectively degrades second messenger cAMP (Kong, A. *et al., Nat Genet 10*, 10 (2002)), which plays a central role in signal transduction and regulation of physiological responses. It is expressed in most cell types important to the pathogenesis of atherosclerosis, including vascular smooth muscle cells (VSCM), endothelial cells, monocytes, macrophages and T-lymphocytes (Houslay, M.D. and Adams, D.R., *Biochem J 370*, 1-18 (2003); Liu, H. and Maurice, D.H., *J Biol Chem 274*, 10557-65. (1999); Liu, H. *et al., J Biol Chem 275*, 26615-24. (2000); Baillie, G., *et al., Mol Pharmacol 60*, 1100-11. (2001); Jin, S.L. and Conti, M., *Proc Natl Acad Sci U S A 99*, 7628-33. (2002)). Cyclic AMP is a key signalling-molecule in these cells (Landells, L.J. *et al., Br J Pharmacol 133*, 722-9 (2001); Fukumoto, S. *et al., Circ Res 85*, 985-91. (1999); Ogawa, S. *et l., Am J Physiol 262*, C546-54 (1992)). In VSMC, low cAMP levels lead to an increase in proliferation and migration that at least in part is mediated by PDE4 (Landells, L.J. *et al., Br J Pharmacol 133*, 722-9 (2001); Stelzner, T.J., *et al., J Cell Physiol 139*, 157-66 (1989); Pan, X., *et al., Biochem Pharmacol 48*, 827-35. (1994)). Animal models have also shown that elevation of cAMP reduces neointimal lesion formation and inhibits proliferation of SMCs after arterial injury (Palmer, D., *et al., Circ Res 82*, 852-61. (1998); Indolfi, C. *et al., Nat Med 3*, 775-9. (1997)). In monocytes and T-lymphocytes, accumulation of cAMP is generally associated with inhibition of immune functions such as proliferation and cytokine secretion (Indolfi, C. *et al., J Am Coll Cardiol 36*, 288-93. (2000)). It is attractive to postulate that the

regulation of cAMP through absolute or relative expression of one or more PDE4D isoforms may differ in individuals susceptible to stroke; some stroke patients may have increased PDE4D activity and, consequently lower cAMP levels in any of the above cell types, leading to development of the atherosclerotic plaque and/or its instability. However, contrary to what one might expect we see decreased expression in some of the PDE4D isoforms in EBV cell lines from stroke patients. It is of interest that these isoforms are all up regulated by cAMP (Liu, H. and Maurice, D.H., *J Biol Chem 274*, 10557-65. (1999); Tilley, S.L., *et al., J Clin Invest 108*, 15-23 (2001); Vicini, E. and Conti, M., *Mol Endocrinol 11*, 839-50 (1997)) suggesting disregulation at the level of cAMP in patients. It is therefore possible that increased activity of one or few splice variants alters the effective PDE4D enzymatic activity of the cell decreasing the cAMP levels thus altering the expression of cAMP regulated isoforms as observed in our expression study. This relative expression of PDE4D isoforms may determine the compartmental localization of PDE4D isoforms and thus the corresponding gradients of intracellular cAMP that have been recently observed (see Housley review).

In summary, we have presented association analyses (single marker and haplotype analyses) that support the notion that the *PDE4D* gene confers risk to ischemic stroke. Furthermore, we have observed significant disregulation of multiple PDE4D isoforms in stroke patients. We propose that this gene is involved in the pathogenesis of stroke through atherosclerosis. PDE4D is expressed in cell types important in atherosclerosis and regulates a second messenger with a central role to processes important in the pathogenesis of atherosclerosis. Inhibition of PDE4D in general or specifically one or more isoforms, by a small molecule drug or other pharmacological agent might decrease the risk of stroke in general, and especially those who are predisposed to stroke through variation in the *PDE4D* gene.

While this invention has been particularly shown and described with reference to preferred embodiments thereof, it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the invention as defined by the appended claims.

CLAIMS

What is claimed is:

1. A method of diagnosing susceptibility to a stroke in an individual, comprising screening for an at-risk haplotype in the phosphodiesterase 4D gene that is more frequently present in an individual susceptible to stroke compared to a healthy individual, wherein the at-risk haplotype increases risk of stroke significantly.

2. The method of claim 1 wherein the significant increase is at least about 20%.

3. The method of claim 1 wherein the significant increase is identified as an odds ratio of at least about 1.2.

4. A method of diagnosing susceptibility to stroke in an individual, comprising screening for an at-risk haplotype in the phosphodiesterase 4D gene that is more frequently present in an individual susceptible to stroke (affected), compared to the frequency of its presence in a healthy individual (control), wherein the presence of the at-risk haplotype is indicative of a susceptibility to stroke.

5. The method of Claim 4 wherein the at risk haplotype 1 is characterized by the presence of G at nucleic acid position 142780, relative to SEQ ID NO: 1 and allele 0 of microsatellite marker AC0088181-1.

6. The method of Claim 4 wherein the at risk haplotype 2 is characterized by the presence of G T A A C C A C G A A C T T A T T G A A T T T G A A at nucleic acid postions: 142780, 135112, 132562, 131865, 129361, 129360, 125304, 123426, 123312, 120628, 118914, 111781, 111252, 109301, 107849, 105225, 104552, 102977, 100795, 99035, 88614, 88456, 83119, 82244, 80127,

78552, relative to SEQ ID NO: 1 and allele 0 of microsatellite marker AC0088181-1.

7. The method of Claim 4 wherein the at risk haplotype 3 is characterized by the presence of A A C A A at nucleic acid positions 138806, 131865, 129361, 120628, 91470, relative to SEQ ID NO: 1.

8. The method of Claim 4 wherein screening for the presence of an at-risk haplotype within or near PDE4D that significantly correlates with haplotype 1 or stroke susceptibility.

9. The method of Claim 4 wherein screening for the presence of an at-risk haplotype within or near PDE4D that significantly correlates with haplotype 2 or stroke susceptibility.

10. The method of Claim 4 wherein screening for the presence of an at-risk haplotype within or near PDE4D that significantly correlates with haplotype 3 or stroke susceptibility.

11. The method of Claim 4 wherein screening for the presence of an at-risk haplotype in the phosphodiesterase 4D gene comprises enzymatic amplification of nucleic acid from said individual.

12. The method of Claim 11 wherein the nucleic acid is DNA.

13. The method of Claim 12 wherein the DNA is mammalian.

14. The method of Claim 13 wherein the DNA is human.

15. The method of Claim 4 wherein screening for the presence of an at-risk haplotype in the phosphodiesterase 4D gene comprises:
    (a) obtaining material containing nucleic acid from the individual;
    (b) amplifying said nucleic acid; and
    (c) determining the presence or absence of an at-risk haplotype in said amplified nucleic acid.

16. The method of Claim 15 wherein determining the presence of an at-risk haplotype is performed by electrophoretic analysis.

17. The method of Claim 15 wherein determining the presence of an at-risk haplotype is performed by restriction length polymorphism analysis.

18. The method of Claim 15 wherein determining the presence of an at-risk haplotype is performed by sequence analysis.

19. The method of Claim 15 wherein determining the presence of an at-risk haplotype is performed by hybridization analysis.

20. A kit for diagnosing susceptibility to stroke in an individual comprising: primers for nucleic acid amplification of a region of the phosphodiesterase 4D gene comprising an at-risk haplotype.

21. The kit of Claim 20 wherein the primers comprise a segment of nucleic acids of length suitable for nucleic acid amplification a single nucleotide polymorphism at nucleic acid position 142780 respectively, relative to SEQ ID NO: 1 and allele 0 of microsatellite marker AC0088181-1.

22. The kit of Claim 20 wherein the primers comprise a segment of nucleic acids of length suitable for nucleic acid amplification, selected from the group consisting of: single nucleotide polymorphism or microsatellite marker at nucleic acid position 142780, 135112, 132562, 131865, 129361, 129360, 125304, 123426, 123312, 120628, 118914, 111781, 111252, 109301, 107849, 105225, 104552, 102977, 100795, 99035, 88614, 88456, 83119, 82244, 80127, 78552, relative to SEQ ID NO: 1, allele 0 of microsatellite marker AC0088181-1. and combinations thereof.

23. The kit of Claim 20 wherein the primers comprise a segment of nucleic acids of length suitable for nucleic acid amplification, selected from the group consisting of: single nucleotide polymorphism at nucleic acid position at nucleic acid position 138806, 131865, 129361, 120628, 91470, relative to SEQ ID NO: 1 and combinations thereof.

24. A method for assessing susceptibility to stroke in an individual, comprising determining PDE4D isoform expression levels in the individual compared to control, wherein a difference in isoform expression is indicative of susceptibility to stroke.

25. The method of Claim 24 wherein isoform PDE4D7 and/or PDE4D9 expression is determined.

26. A method of diagnosing a susceptibility to stroke, comprising detecting an alteration in the expression or composition of a polypeptide encoded by phosphodiesterase 4D gene in a test sample, in comparison with the expression or composition of a polypeptide encoded by phosphodiesterase 4D gene in a control sample, wherein the presence of an alteration in expression or

composition of the polypeptide in the test sample is indicative of a susceptibility to stroke.

27. The method of Claim 26, wherein the alteration in the expression or composition of a polypeptide encoded by phosphodiesterase 4D gene comprises expression of a splicing variant polypeptide in a test sample that differs from a splicing variant polypeptide expressed in a control sample.

28. A method for preventing the occurrence of stroke in an individual in need thereof, comprising regulating a PDE4D isoform level compared to control, whereby the regulated isoform level mimics the level in a healthy individual.

29. The method of Claim 28 wherein isoform level is regulated by regulating expression of the isoform using a phosphodiesterase 4D gene binding agent, a phosphodiesterase 4D gene receptor, a peptidomimetic, a fusion protein, a prodrug, an antibody or a ribozyme.

30. The method of Claim 28 wherein the isoform level is controlled by genetically altering the isoform's expression level.

31. The method of Claim 28 wherein the isoform level is regulated by altering the ratio of isoforms.

32. The method of Claim 28 wherein isoform PDE4D7 and/or PDE4D9 is regulated.

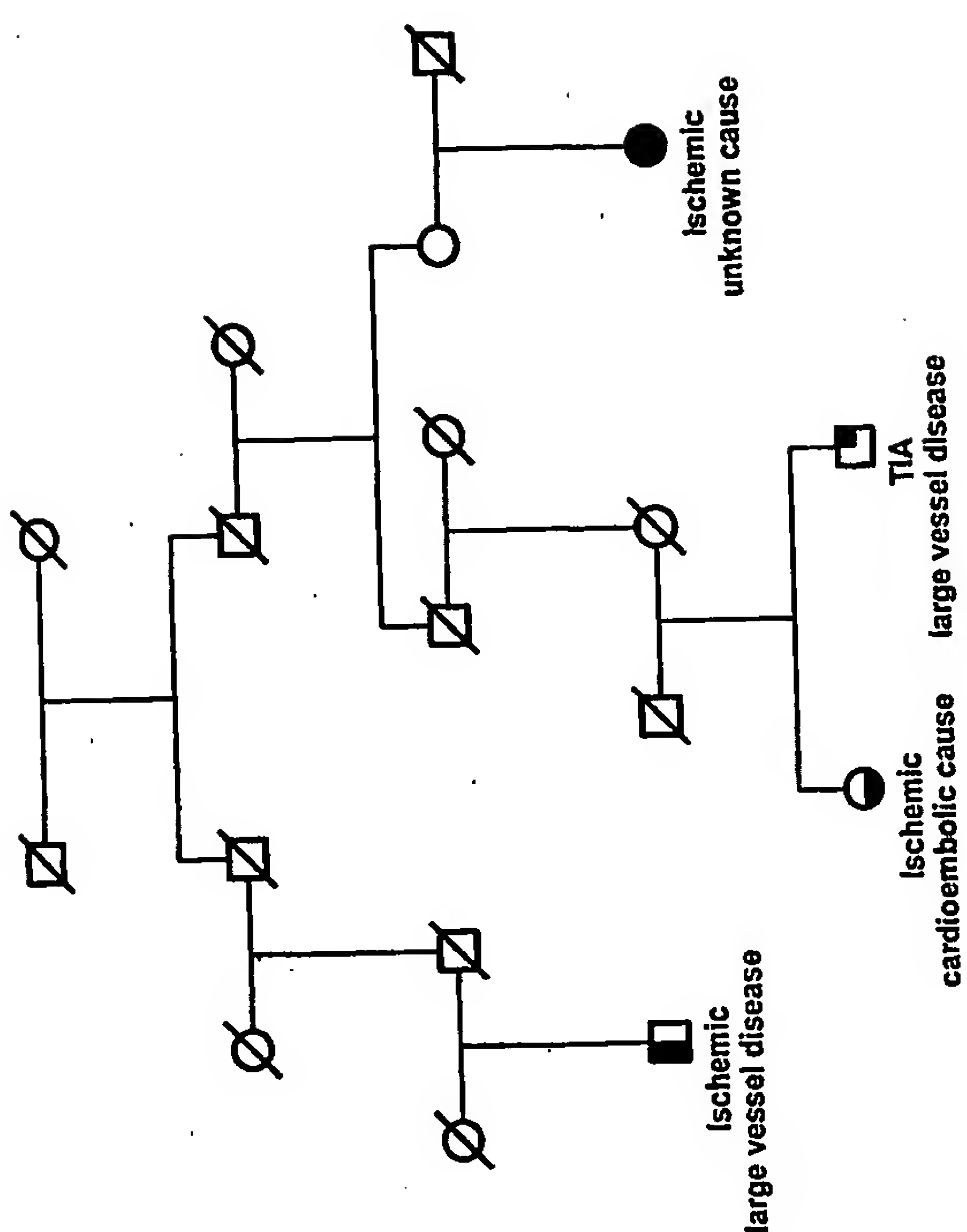
33. A method for monitoring the effectiveness of treatment on the regulation of expression of one or more PDE4D isoforms at the RNA or protein level, or its enzymatic activity by measuring PDE4D message or protein or enzymatic activity in a sample of peripheral blood or cells derived thereof.

34. A method for predicting the effectiveness of a given therapeutic for stroke prevention or treatment in a given individual comprising screening for the presence or absence of the stroke at-risk haplotype in the phosphodiesterase 4D gene.

35. A method for predicting the effectiveness of a given therapeutic for stroke prevention or treatment in a given individual comprising screening for the expression of one or more PDE4D isoforms at the RNA or protein level, or its enzymatic activity by measuring PDE4D message or protein or enzymatic activity in a sample of peripheral blood or cells derived thereof.

36. A method of diagnosing a reduced or protective susceptibility to a stroke in an individual, comprising screening for a protective haplotype in the phosphodiesterase, 4D gene that is more frequently present in an individual compared to an individual susceptible to stroke, wherein the protective haplotype decreases the risk of stroke significantly

37. A method of Claim 36 wherein the protective haplotype is characterized by the A allele at position 142780, relative to SEQ ID NO: 1and allele -8 for microsatellitemarker AC0088181-1.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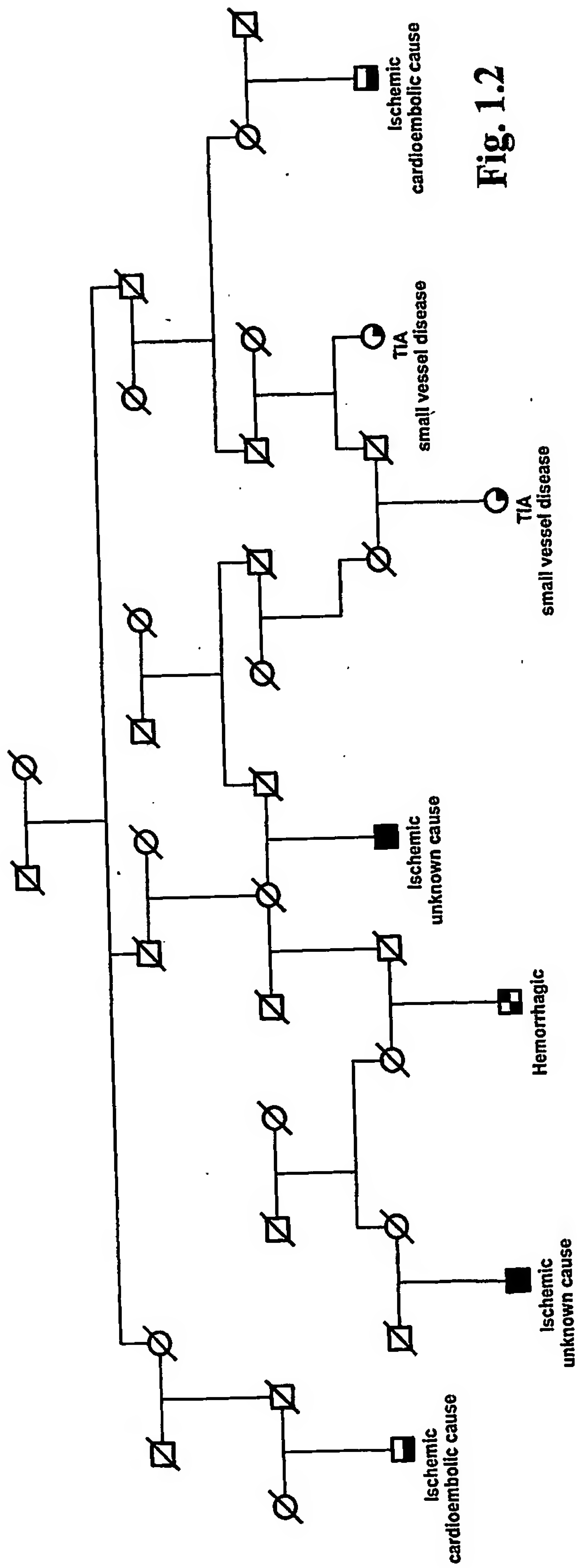
unknown cause
TIA
large vessel disease
Ischemic
cardioembolic cause
Ischemic
large vessel disease

Fig. 1.1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cardioembolic cause
TIA
small vessel disease
TIA
small vessel disease
Ischemic
unknown cause
Hemorrhagic
Ischemic
unknown cause
Ischemic
cardioembolic cause

Fig. 1.2

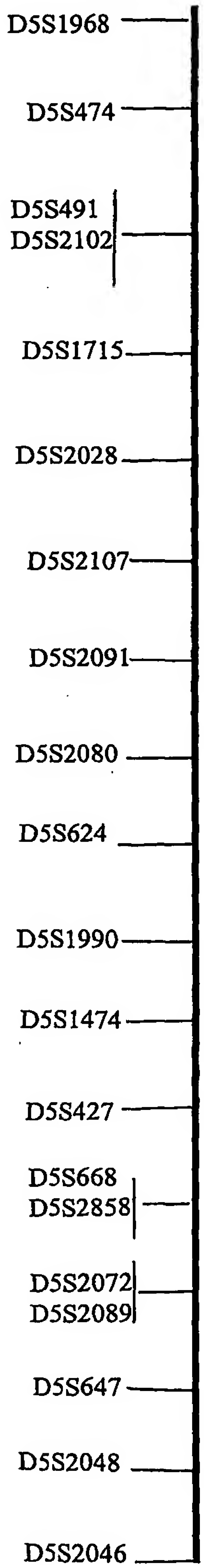


Fig. 2.1

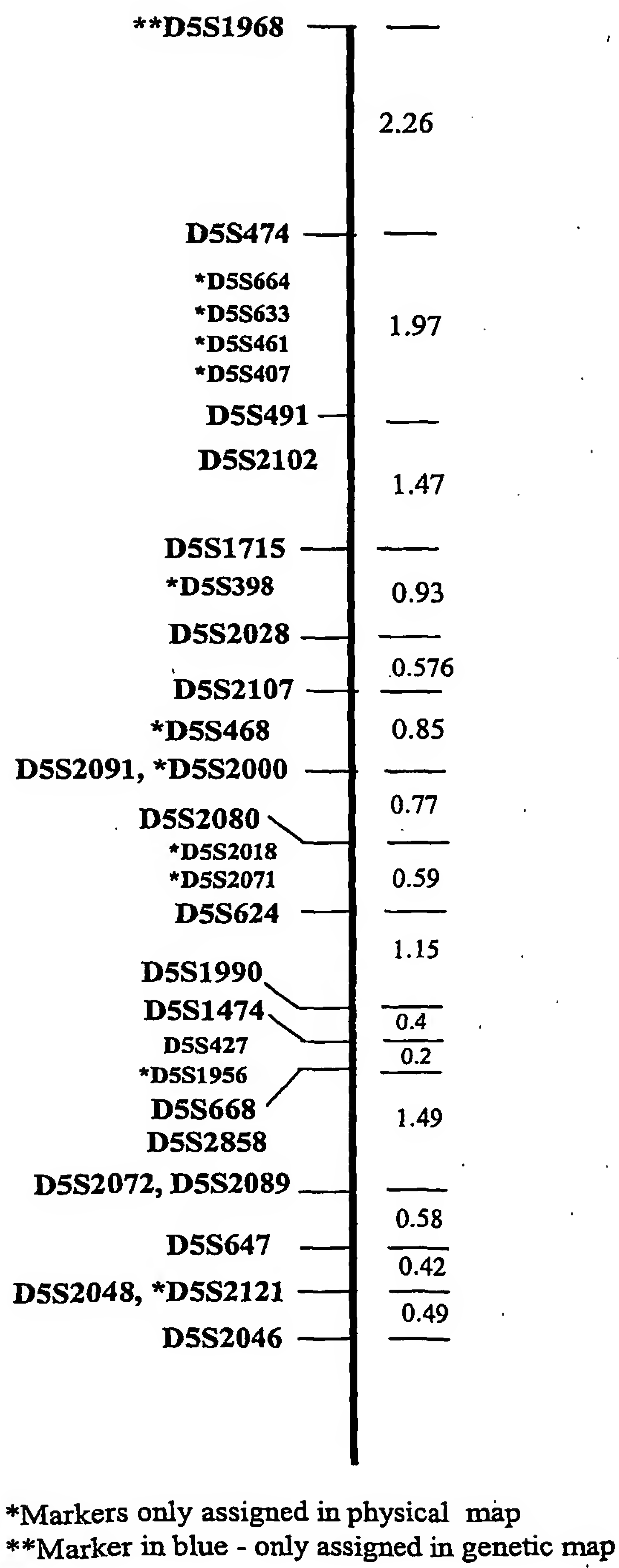


Fig. 2.2

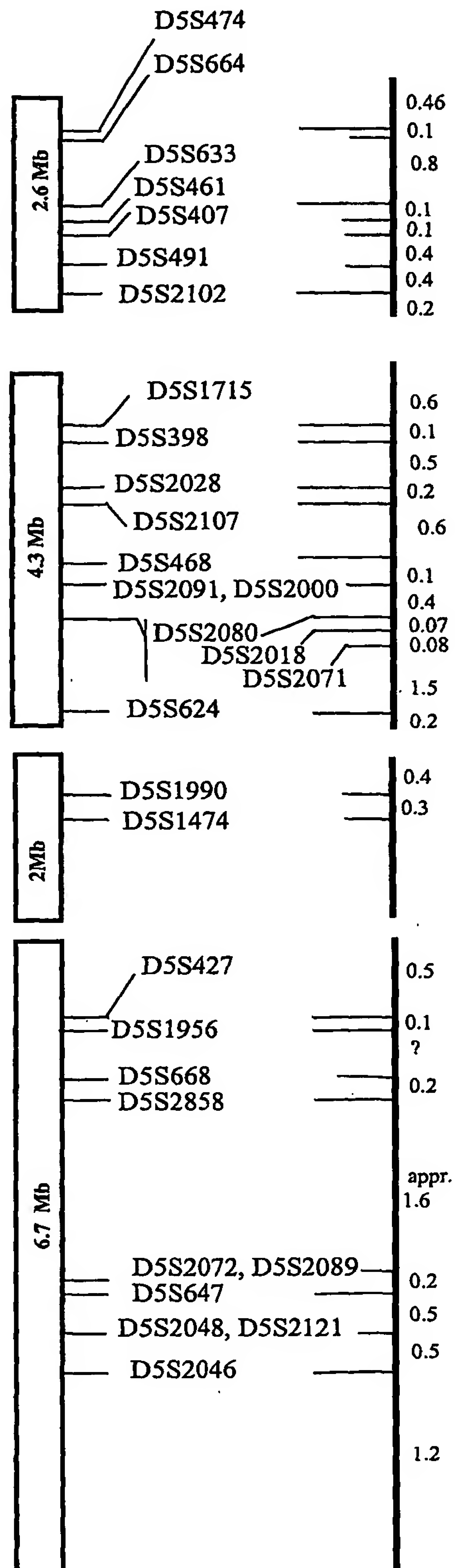
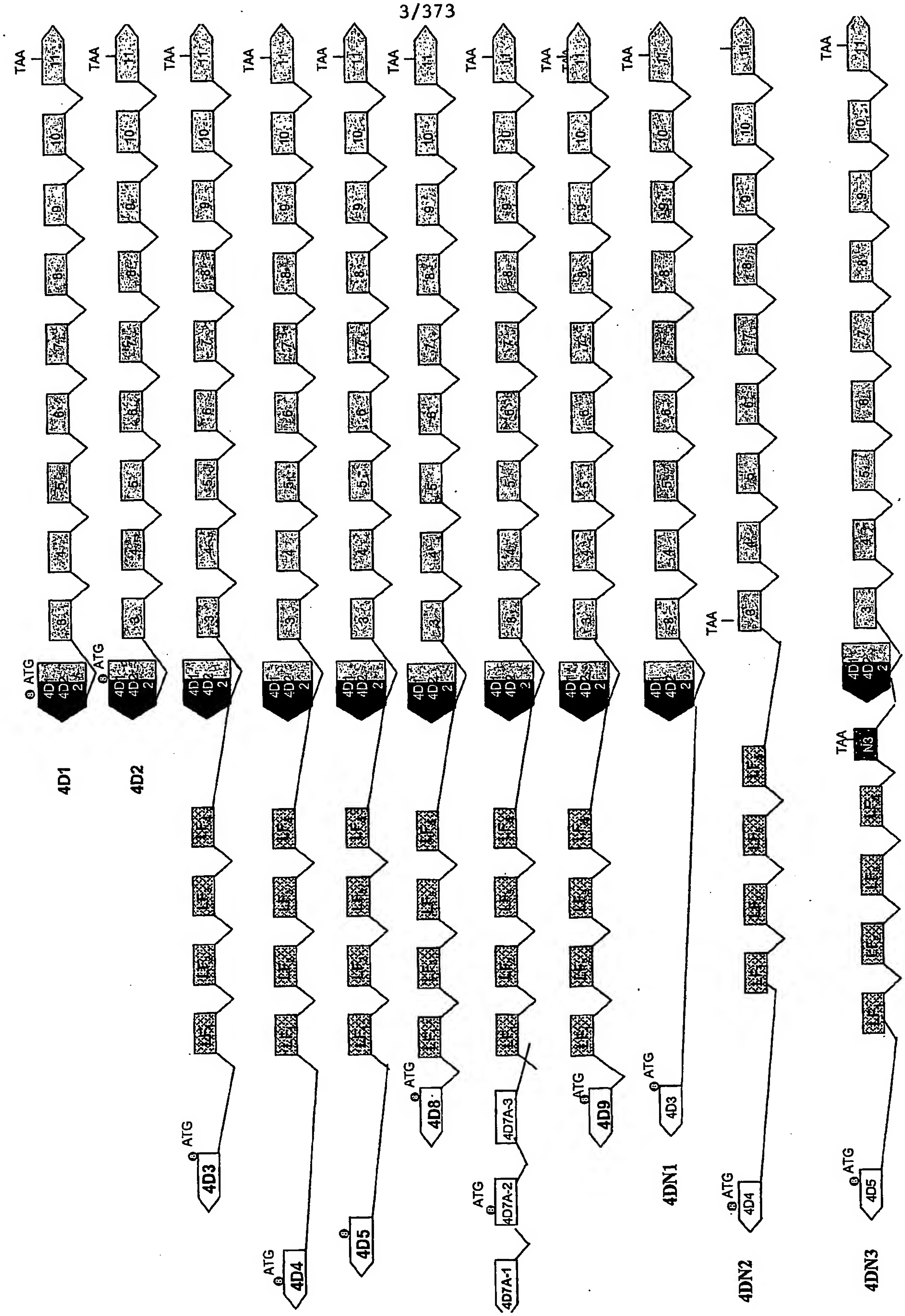


Fig. 2.3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4D2
4D3
4D4
4D5
4D8
4D7A-1
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4D7A-3
4D9
4DN1
4DN2
4DN3
ATG
TAA
N3

FIG. 3

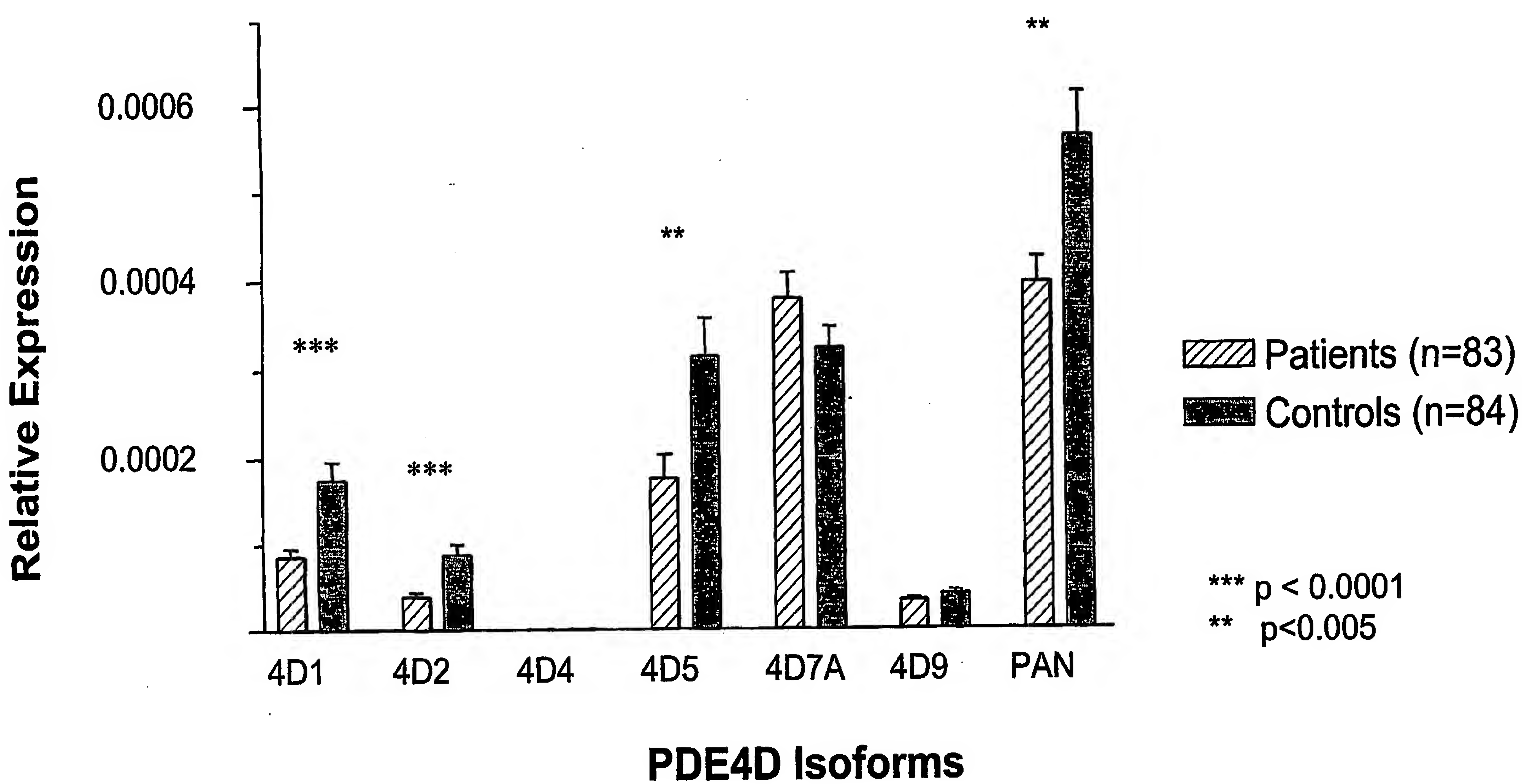

FIG. 4

PDE4D isoform expression in EBV transformed cell lines (expression of PDE4D3 and -4D8 below detection limits).

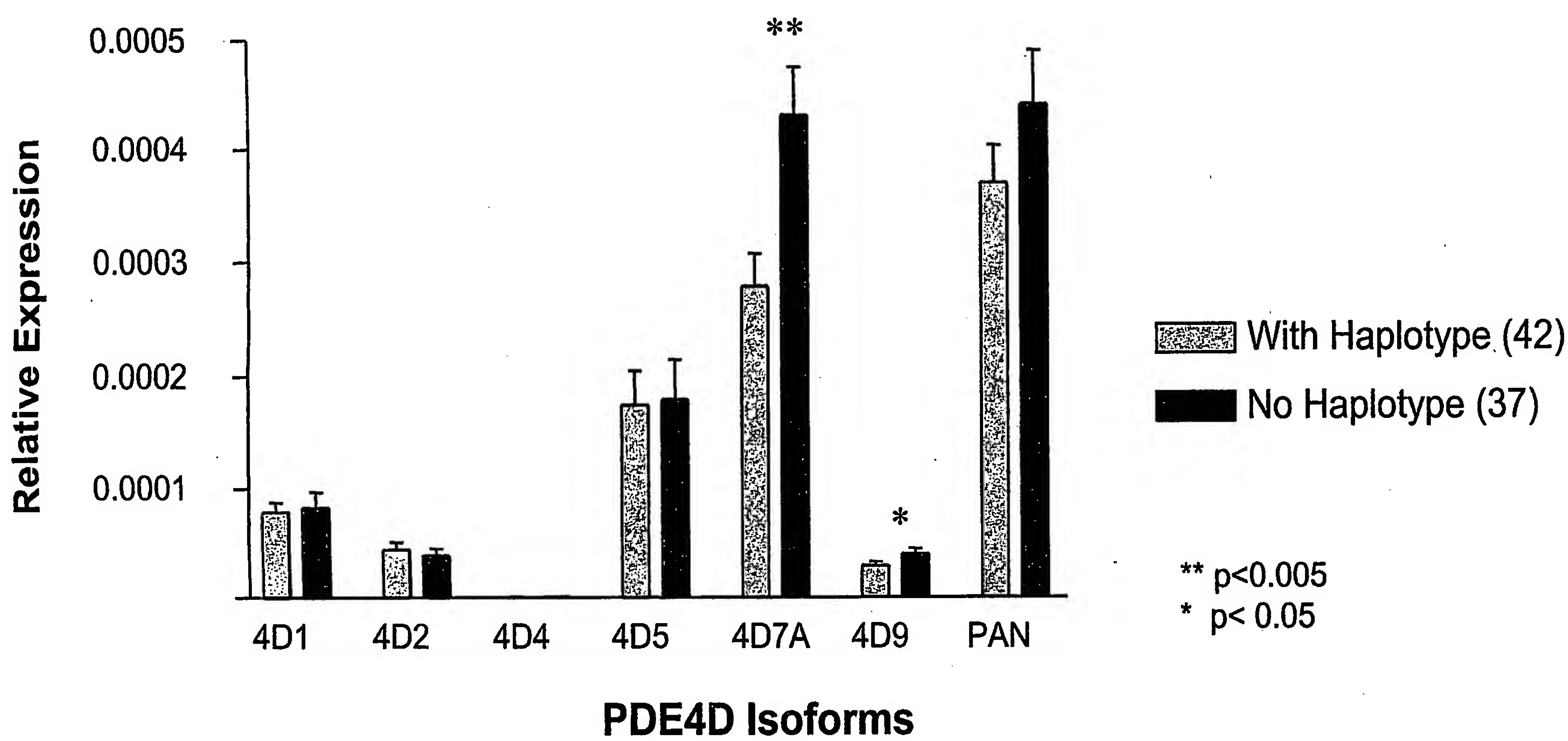

FIG. 5

Expression of PDE4D isoforms in EBV transformed cells from patients with or without the stroke associated haplotype

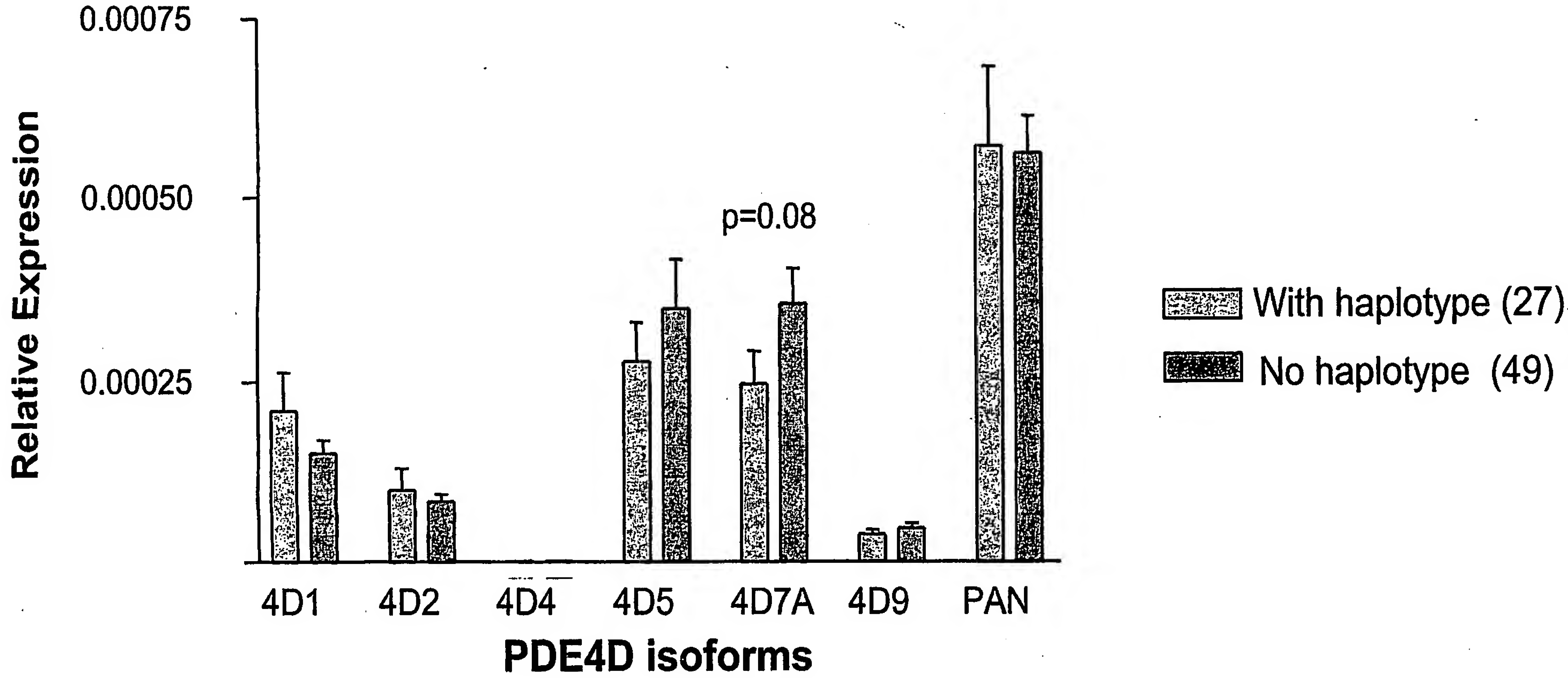

FIG. 6

Expression of PDE4D isoforms in EBV cells from controls with or without the stroke associated haplotype

<210> 2
<211> 809
<212> PRT
<213> Homo Sapien

<400> 2
Met Glu Ala Glu Gly Ser Ser Ala Pro Ala Arg Ala Gly Ser Gly Glu
1   5   10   15
Gly Ser Asp Ser Ala Gly Gly Ala Thr Leu Lys Ala Pro Lys His Leu
            20   25   30
Trp Arg His Glu Gln His His Gln Tyr Pro Leu Arg Gln Pro Gln Phe
        35   40   45
Arg Leu Leu His Pro His His His Leu Pro Pro Pro Pro Pro Pro Ser
    50   55   60
Pro Gln Pro Gln Pro Gln Cys Pro Leu Gln Pro Pro Pro Pro Pro Pro
65   70   75   80
Leu Pro Pro Pro Pro Pro Pro Pro Gly Ala Ala Arg Gly Arg Tyr Ala
                85   90   95
Ser Ser Gly Ala Thr Gly Arg Val Arg His Arg Gly Tyr Ser Asp Thr
            100   105   110
Glu Arg Tyr Leu Tyr Cys Arg Ala Met Asp Arg Thr Ser Tyr Ala Val
        115   120   125
Glu Thr Gly His Arg Pro Gly Leu Lys Lys Ser Arg Met Ser Trp Pro
    130   135   140
Ser Ser Phe Gln Gly Leu Arg Arg Phe Asp Val Asp Asn Gly Thr Ser
145   150   155   160
Ala Gly Arg Ser Pro Leu Asp Pro Met Thr Ser Pro Gly Ser Gly Leu
                165   170   175
Ile Leu Gln Ala Asn Phe Val His Ser Gln Arg Arg Glu Ser Phe Leu
            180   185   190
Tyr Arg Ser Asp Ser Asp Tyr Asp Leu Ser Pro Lys Ser Met Ser Arg
        195   200   205
Asn Ser Ser Ile Ala Ser Asp Ile His Gly Asp Asp Leu Ile Val Thr
    210   215   220
Pro Phe Ala Gln Val Leu Ala Ser Leu Arg Thr Val Arg Asn Asn Phe
225   230   235   240
Ala Ala Leu Thr Asn Leu Gln Asp Arg Ala Pro Ser Lys Arg Ser Pro
                245   250   255
Met Cys Asn Gln Pro Ser Ile Asn Lys Ala Thr Ile Thr Glu Glu Ala
            260   265   270
Tyr Gln Lys Leu Ala Ser Glu Thr Leu Glu Glu Leu Asp Trp Cys Leu
        275   280   285
Asp Gln Leu Glu Thr Leu Gln Thr Arg His Ser Val Ser Glu Met Ala
    290   295   300
Ser Asn Lys Phe Lys Arg Met Leu Asn Arg Glu Leu Thr His Leu Ser
305   310   315   320
Glu Met Ser Arg Ser Gly Asn Gln Val Ser Glu Phe Ile Ser Asn Thr
                325   330   335
Phe Leu Asp Lys Gln His Glu Val Glu Ile Pro Ser Pro Thr Gln Lys
            340   345   350
Glu Lys Glu Lys Lys Lys Arg Pro Met Ser Gln Ile Ser Gly Val Lys
        355   360   365
Lys Leu Met His Ser Ser Ser Leu Thr Asn Ser Ser Ile Pro Arg Phe
    370   375   380
Gly Val Lys Thr Glu Gln Glu Asp Val Leu Ala Lys Glu Leu Glu Asp
385   390   395   400
Val Asn Lys Trp Gly Leu His Val Phe Arg Ile Ala Glu Leu Ser Gly
                405   410   415
Asn Arg Pro Leu Thr Val Ile Met His Thr Ile Phe Gln Glu Arg Asp
            420   425   430
Leu Leu Lys Thr Phe Lys Ile Pro Val Asp Thr Leu Ile Thr Tyr Leu
        435   440   445
Met Thr Leu Glu Asp His Tyr His Ala Asp Val Ala Tyr His Asn Asn
    450   455   460
Ile His Ala Ala Asp Val Val Gln Ser Thr His Val Leu Leu Ser Thr
465   470   475   480
Pro Ala Leu Glu Ala Val Phe Thr Asp Leu Glu Ile Leu Ala Ala Ile
                485   490   495

Phe Ala Ser Ala Ile His Asp Val Asp His Pro Gly Val Ser Asn Gln
500 505 510
Phe Leu Ile Asn Thr Asn Ser Glu Leu Ala Leu Met Tyr Asn Asp Ser
515 520 525
Ser Val Leu Glu Asn His His Leu Ala Val Gly Phe Lys Leu Leu Gln
530 535 540
Glu Glu Asn Cys Asp Ile Phe Gln Asn Leu Thr Lys Lys Gln Arg Gln
545 550 555 560
Ser Leu Arg Lys Met Val Ile Asp Ile Val Leu Ala Thr Asp Met Ser
565 570 575
Lys His Met Asn Leu Leu Ala Asp Leu Lys Thr Met Val Glu Thr Lys
580 585 590
Lys Val Thr Ser Ser Gly Val Leu Leu Leu Asp Asn Tyr Ser Asp Arg
595 600 605
Ile Gln Val Leu Gln Asn Met Val His Cys Ala Asp Leu Ser Asn Pro
610 615 620
Thr Lys Pro Leu Gln Leu Tyr Arg Gln Trp Thr Asp Arg Ile Met Glu
625 630 635 640
Glu Phe Phe Arg Gln Gly Asp Arg Glu Arg Glu Arg Gly Met Glu Ile
645 650 655
Ser Pro Met Cys Asp Lys His Asn Ala Ser Val Glu Lys Ser Gln Val
660 665 670
Gly Phe Ile Asp Tyr Ile Val His Pro Leu Trp Glu Thr Trp Ala Asp
675 680 685
Leu Val His Pro Asp Ala Gln Asp Ile Leu Asp Thr Leu Glu Asp Asn
690 695 700
Arg Glu Trp Tyr Gln Ser Thr Ile Pro Gln Ser Pro Ser Pro Ala Pro
705 710 715 720
Asp Asp Pro Glu Glu Gly Arg Gln Gly Gln Thr Glu Lys Phe Gln Phe
725 730 735
Glu Leu Thr Leu Glu Glu Asp Gly Glu Ser Asp Thr Glu Lys Asp Ser
740 745 750
Gly Ser Gln Val Glu Glu Asp Thr Ser Cys Ser Asp Ser Lys Thr Leu
755 760 765
Cys Thr Gln Asp Ser Glu Ser Thr Glu Ile Pro Leu Asp Glu Gln Val
770 775 780
Glu Glu Glu Ala Val Gly Glu Glu Glu Glu Ser Gln Pro Glu Ala Cys
785 790 795 800
Val Ile Asp Asp Arg Ser Pro Asp Thr
805

<210> 3
<211> 150
<212> PRT
<213> Homo Sapien

<400> 3
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1 5 10 15
Lys Lys Ser Arg Met Ser Trp Pro Ser Ser Phe Gln Gly Leu Arg Arg
20 25 30
Phe Asp Val Asp Asn Gly Thr Ser Ala Gly Arg Ser Pro Leu Asp Pro
35 40 45
Met Thr Ser Pro Gly Ser Gly Leu Ile Leu Gln Ala Asn Phe Val His
50 55 60
Ser Gln Arg Arg Glu Ser Phe Leu Tyr Arg Ser Asp Ser Asp Tyr Asp
65 70 75 80
Leu Ser Pro Lys Ser Met Ser Arg Asn Ser Ser Ile Ala Ser Asp Ile
85 90 95
His Gly Asp Asp Leu Ile Val Thr Pro Phe Ala Gln Val Leu Ala Ser
100 105 110
Leu Arg Thr Val Arg Asn Asn Phe Ala Ala Leu Thr Asn Leu Gln Asp
115 120 125
Arg Ala Pro Ser Lys Arg Ser Pro Met Cys Asn Gln Pro Ser Ile Asn
130 135 140
Lys Ala Thr Ile Thr Val

Fig. 7.2

145 150

<210> 4
<211> 745
<212> PRT
<213> Homo Sapien

<400> 4
Met Ala Gln Gln Thr Ser Pro Asp Thr Leu Thr Val Pro Glu Val Asp
1 5 10 15
Asn Pro His Cys Pro Asn Pro Trp Leu Asn Glu Asp Leu Val Lys Ser
20 25 30
Leu Arg Glu Asn Leu Leu Gln His Glu Lys Ser Lys Thr Ala Arg Lys
35 40 45
Ser Val Ser Pro Lys Leu Ser Pro Val Ile Ser Pro Arg Asn Ser Pro
50 55 60
Arg Leu Leu Arg Arg Met Leu Leu Ser Ser Asn Ile Pro Lys Gln Arg
65 70 75 80
Arg Phe Thr Val Ala His Thr Cys Phe Asp Val Asp Asn Gly Thr Ser
85 90 95
Ala Gly Arg Ser Pro Leu Asp Pro Met Thr Ser Pro Gly Ser Gly Leu
100 105 110
Ile Leu Gln Ala Asn Phe Val His Ser Gln Arg Arg Glu Ser Phe Leu
115 120 125
Tyr Arg Ser Asp Ser Asp Tyr Asp Leu Ser Pro Lys Ser Met Ser Arg
130 135 140
Asn Ser Ser Ile Ala Ser Asp Ile His Gly Asp Asp Leu Ile Val Thr
145 150 155 160
Pro Phe Ala Gln Val Leu Ala Ser Leu Arg Thr Val Arg Asn Asn Phe
165 170 175
Ala Ala Leu Thr Asn Leu Gln Asp Arg Ala Pro Ser Lys Arg Ser Pro
180 185 190
Met Cys Asn Gln Pro Ser Ile Asn Lys Ala Thr Ile Thr Glu Glu Ala
195 200 205
Tyr Gln Lys Leu Ala Ser Glu Thr Leu Glu Glu Leu Asp Trp Cys Leu
210 215 220
Asp Gln Leu Glu Thr Leu Gln Thr Arg His Ser Val Ser Glu Met Ala
225 230 235 240
Ser Asn Lys Phe Lys Arg Met Leu Asn Arg Glu Leu Thr His Leu Ser
245 250 255
Glu Met Ser Arg Ser Gly Asn Gln Val Ser Glu Phe Ile Ser Asn Thr
260 265 270
Phe Leu Asp Lys Gln His Glu Val Glu Ile Pro Ser Pro Thr Gln Lys
275 280 285
Glu Lys Glu Lys Lys Lys Arg Pro Met Ser Gln Ile Ser Gly Val Lys
290 295 300
Lys Leu Met His Ser Ser Ser Leu Thr Asn Ser Ser Ile Pro Arg Phe
305 310 315 320
Gly Val Lys Thr Glu Gln Glu Asp Val Leu Ala Lys Glu Leu Glu Asp
325 330 335
Val Asn Lys Trp Gly Leu His Val Phe Arg Ile Ala Glu Leu Ser Gly
340 345 350
Asn Arg Pro Leu Thr Val Ile Met His Thr Ile Phe Gln Glu Arg Asp
355 360 365
Leu Leu Lys Thr Phe Lys Ile Pro Val Asp Thr Leu Ile Thr Tyr Leu
370 375 380
Met Thr Leu Glu Asp His Tyr His Ala Asp Val Ala Tyr His Asn Asn
385 390 395 400
Ile His Ala Ala Asp Val Val Gln Ser Thr His Val Leu Leu Ser Thr
405 410 415
Pro Ala Leu Glu Ala Val Phe Thr Asp Leu Glu Ile Leu Ala Ala Ile
420 425 430
Phe Ala Ser Ala Ile His Asp Val Asp His Pro Gly Val Ser Asn Gln
435 440 445
Phe Leu Ile Asn Thr Asn Ser Glu Leu Ala Leu Met Tyr Asn Asp Ser
450 455 460

Fig. 7.3

Ser Val Leu Glu Asn His His Leu Ala Val Gly Phe Lys Leu Leu Gln
465 470 475 480
Glu Glu Asn Cys Asp Ile Phe Gln Asn Leu Thr Lys Lys Gln Arg Gln
485 490 495
Ser Leu Arg Lys Met Val Ile Asp Ile Val Leu Ala Thr Asp Met Ser
500 505 510
Lys His Met Asn Leu Leu Ala Asp Leu Lys Thr Met Val Glu Thr Lys
515 520 525
Lys Val Thr Ser Ser Gly Val Leu Leu Leu Asp Asn Tyr Ser Asp Arg
530 535 540
Ile Gln Val Leu Gln Asn Met Val His Cys Ala Asp Leu Ser Asn Pro
545 550 555 560
Thr Lys Pro Leu Gln Leu Tyr Arg Gln Trp Thr Asp Arg Ile Met Glu
565 570 575
Glu Phe Phe Arg Gln Gly Asp Arg Glu Arg Glu Arg Gly Met Glu Ile
580 585 590
Ser Pro Met Cys Asp Lys His Asn Ala Ser Val Glu Lys Ser Gln Val
595 600 605
Gly Phe Ile Asp Tyr Ile Val His Pro Leu Trp Glu Thr Trp Ala Asp
610 615 620
Leu Val His Pro Asp Ala Gln Asp Ile Leu Asp Thr Leu Glu Asp Asn
625 630 635 640
Arg Glu Trp Tyr Gln Ser Thr Ile Pro Gln Ser Pro Ser Pro Ala Pro
645 650 655
Asp Asp Pro Glu Glu Gly Arg Gln Gly Gln Thr Glu Lys Phe Gln Phe
660 665 670
Glu Leu Thr Leu Glu Glu Asp Gly Glu Ser Asp Thr Glu Lys Asp Ser
675 680 685
Gly Ser Gln Val Glu Glu Asp Thr Ser Cys Ser Asp Ser Lys Thr Leu
690 695 700
Cys Thr Gln Asp Ser Glu Ser Thr Glu Ile Pro Leu Asp Glu Gln Val
705 710 715 720
Glu Glu Glu Ala Val Gly Glu Glu Glu Glu Ser Gln Pro Glu Ala Cys
725 730 735
Val Ile Asp Asp Arg Ser Pro Asp Thr
740 745

<210> 5
<211> 215
<212> PRT
<213> Homo Sapien

<400> 5

Met Ala Gln Gln Thr Ser Pro Asp Thr Leu Thr Val Pro Glu Val Asp
1 5 10 15
Asn Pro His Cys Pro Asn Pro Trp Leu Asn Glu Asp Leu Val Lys Ser
20 25 30
Leu Arg Glu Asn Leu Leu Gln His Glu Lys Ser Lys Thr Ala Arg Lys
35 40 45
Ser Val Ser Pro Lys Leu Ser Pro Val Ile Ser Pro Arg Asn Ser Pro
50 55 60
Arg Leu Leu Arg Arg Met Leu Leu Ser Ser Asn Ile Pro Lys Gln Arg
65 70 75 80
Arg Phe Thr Val Ala His Thr Cys Phe Asp Val Asp Asn Gly Thr Ser
85 90 95
Ala Gly Arg Ser Pro Leu Asp Pro Met Thr Ser Pro Gly Ser Gly Leu
100 105 110
Ile Leu Gln Ala Asn Phe Val His Ser Gln Arg Arg Glu Ser Phe Leu
115 120 125

Tyr Arg Ser Asp Ser Asp Tyr Asp Leu Ser Pro Lys Ser Met Ser Arg
130 135 140
Asn Ser Ser Ile Ala Ser Asp Ile His Gly Asp Asp Leu Ile Val Thr
145 150 155 160
Pro Phe Ala Gln Val Leu Ala Ser Leu Arg Thr Val Arg Asn Asn Phe

Fig. 7.4

```
                165                 170                 175
Ala Ala Leu Thr Asn Leu Gln Asp Arg Ala Pro Ser Lys Arg Ser Pro
            180                 185                 190
Met Cys Asn Gln Pro Ser Ile Asn Lys Ala Thr Ile Thr Gly Leu Tyr
        195                 200                 205
Asn Gly Ile Ile Ala Phe Leu
    210                 215


<210> 6
<211> 673
<212> PRT
<213> Homo Sapien

<400> 6
Met Met His Val Asn Asn Phe Pro Phe Arg Arg His Ser Trp Ile Cys
1               5                   10                  15
Phe Asp Val Asp Asn Gly Thr Ser Ala Gly Arg Ser Pro Leu Asp Pro
            20                  25                  30
Met Thr Ser Pro Gly Ser Gly Leu Ile Leu Gln Ala Asn Phe Val His
        35                  40                  45
Ser Gln Arg Arg Glu Ser Phe Leu Tyr Arg Ser Asp Ser Asp Tyr Asp
    50                  55                  60
Leu Ser Pro Lys Ser Met Ser Arg Asn Ser Ser Ile Ala Ser Asp Ile
65                  70                  75                  80
His Gly Asp Asp Leu Ile Val Thr Pro Phe Ala Gln Val Leu Ala Ser
                85                  90                  95
Leu Arg Thr Val Arg Asn Asn Phe Ala Ala Leu Thr Asn Leu Gln Asp
            100                 105                 110
Arg Ala Pro Ser Lys Arg Ser Pro Met Cys Asn Gln Pro Ser Ile Asn
        115                 120                 125
Lys Ala Thr Ile Thr Glu Glu Ala Tyr Gln Lys Leu Ala Ser Glu Thr
    130                 135                 140
Leu Glu Glu Leu Asp Trp Cys Leu Asp Gln Leu Glu Thr Leu Gln Thr
145                 150                 155                 160
Arg His Ser Val Ser Glu Met Ala Ser Asn Lys Phe Lys Arg Met Leu
                165                 170                 175
Asn Arg Glu Leu Thr His Leu Ser Glu Met Ser Arg Ser Gly Asn Gln
            180                 185                 190
Val Ser Glu Phe Ile Ser Asn Thr Phe Leu Asp Lys Gln His Glu Val
        195                 200                 205
Glu Ile Pro Ser Pro Thr Gln Lys Glu Lys Glu Lys Lys Lys Arg Pro
    210                 215                 220
Met Ser Gln Ile Ser Gly Val Lys Lys Leu Met His Ser Ser Ser Leu
225                 230                 235                 240
Thr Asn Ser Ser Ile Pro Arg Phe Gly Val Lys Thr Glu Gln Glu Asp
                245                 250                 255
Val Leu Ala Lys Glu Leu Glu Asp Val Asn Lys Trp Gly Leu His Val
            260                 265                 270
Phe Arg Ile Ala Glu Leu Ser Gly Asn Arg Pro Leu Thr Val Ile Met
        275                 280                 285
His Thr Ile Phe Gln Glu Arg Asp Leu Leu Lys Thr Phe Lys Ile Pro
    290                 295                 300
Val Asp Thr Leu Ile Thr Tyr Leu Met Thr Leu Glu Asp His Tyr His
305                 310                 315                 320
Ala Asp Val Ala Tyr His Asn Asn Ile His Ala Ala Asp Val Val Gln
                325                 330                 335
Ser Thr His Val Leu Leu Ser Thr Pro Ala Leu Glu Ala Val Phe Thr
            340                 345                 350
Asp Leu Glu Ile Leu Ala Ala Ile Phe Ala Ser Ala Ile His Asp Val
        355                 360                 365
Asp His Pro Gly Val Ser Asn Gln Phe Leu Ile Asn Thr Asn Ser Glu
    370                 375                 380
Leu Ala Leu Met Tyr Asn Asp Ser Ser Val Leu Glu Asn His His Leu
385                 390                 395                 400
Ala Val Gly Phe Lys Leu Leu Gln Glu Glu Asn Cys Asp Ile Phe Gln
                405                 410                 415
```

Fig. 7.5

```
Asn Leu Thr Lys Lys Gln Arg Gln Ser Leu Arg Lys Met Val Ile Asp
            420                 425                 430
Ile Val Leu Ala Thr Asp Met Ser Lys His Met Asn Leu Leu Ala Asp
        435                 440                 445
Leu Lys Thr Met Val Glu Thr Lys Lys Val Thr Ser Ser Gly Val Leu
    450                 455                 460
Leu Leu Asp Asn Tyr Ser Asp Arg Ile Gln Val Leu Gln Asn Met Val
465                 470                 475                 480
His Cys Ala Asp Leu Ser Asn Pro Thr Lys Pro Leu Gln Leu Tyr Arg
                485                 490                 495
Gln Trp Thr Asp Arg Ile Met Glu Glu Phe Phe Arg Gln Gly Asp Arg
            500                 505                 510
Glu Arg Glu Arg Gly Met Glu Ile Ser Pro Met Cys Asp Lys His Asn
        515                 520                 525
Ala Ser Val Glu Lys Ser Gln Val Gly Phe Ile Asp Tyr Ile Val His
    530                 535                 540
Pro Leu Trp Glu Thr Trp Ala Asp Leu Val His Pro Asp Ala Gln Asp
545                 550                 555                 560
Ile Leu Asp Thr Leu Glu Asp Asn Arg Glu Trp Tyr Gln Ser Thr Ile
                565                 570                 575
Pro Gln Ser Pro Ser Pro Ala Pro Asp Asp Pro Glu Glu Gly Arg Gln
            580                 585                 590
Gly Gln Thr Glu Lys Phe Gln Phe Glu Leu Thr Leu Glu Glu Asp Gly
        595                 600                 605
Glu Ser Asp Thr Glu Lys Asp Ser Gly Ser Gln Val Glu Glu Asp Thr
    610                 615                 620
Ser Cys Ser Asp Ser Lys Thr Leu Cys Thr Gln Asp Ser Glu Ser Thr
625                 630                 635                 640
Glu Ile Pro Leu Asp Glu Gln Val Glu Glu Glu Ala Val Gly Glu Glu
                645                 650                 655
Glu Glu Ser Gln Pro Glu Ala Cys Val Ile Asp Asp Arg Ser Pro Asp
            660                 665                 670
Thr


&lt;210&gt; 7
&lt;211&gt; 15
&lt;212&gt; PRT
&lt;213&gt; Homo Sapien

&lt;400&gt; 7
Met Met His Val Asn Asn Phe Pro Phe Arg Arg His Ser Trp Ile
 1               5                  10                  15


&lt;210&gt; 8
&lt;211&gt; 687
&lt;212&gt; PRT
&lt;213&gt; Homo Sapien

&lt;400&gt; 8
Met Ala Phe Val Trp Asp Pro Leu Gly Ala Thr Val Pro Gly Pro Ser
 1               5                  10                  15
Thr Arg Ala Lys Ser Arg Leu Arg Phe Ser Lys Ser Tyr Ser Phe Asp
            20                  25                  30
Val Asp Asn Gly Thr Ser Ala Gly Arg Ser Pro Leu Asp Pro Met Thr
        35                  40                  45
Ser Pro Gly Ser Gly Leu Ile Leu Gln Ala Asn Phe Val His Ser Gln
    50                  55                  60
Arg Arg Glu Ser Phe Leu Tyr Arg Ser Asp Ser Asp Tyr Asp Leu Ser
65                  70                  75                  80
Pro Lys Ser Met Ser Arg Asn Ser Ser Ile Ala Ser Asp Ile His Gly
                85                  90                  95
Asp Asp Leu Ile Val Thr Pro Phe Ala Gln Val Leu Ala Ser Leu Arg
            100                 105                 110
Thr Val Arg Asn Asn Phe Ala Ala Leu Thr Asn Leu Gln Asp Arg Ala
```

```
        115                 120                 125
Pro Ser Lys Arg Ser Pro Met Cys Asn Gln Pro Ser Ile Asn Lys Ala
    130                 135                 140
Thr Ile Thr Glu Glu Ala Tyr Gln Lys Leu Ala Ser Glu Thr Leu Glu
145                 150                 155                 160
Glu Leu Asp Trp Cys Leu Asp Gln Leu Glu Thr Leu Gln Thr Arg His
                165                 170                 175
Ser Val Ser Glu Met Ala Ser Asn Lys Phe Lys Arg Met Leu Asn Arg
            180                 185                 190
Glu Leu Thr His Leu Ser Glu Met Ser Arg Ser Gly Asn Gln Val Ser
        195                 200                 205
Glu Phe Ile Ser Asn Thr Phe Leu Asp Lys Gln His Glu Val Glu Ile
    210                 215                 220
Pro Ser Pro Thr Gln Lys Glu Lys Glu Lys Lys Lys Arg Pro Met Ser
225                 230                 235                 240
Gln Ile Ser Gly Val Lys Lys Leu Met His Ser Ser Ser Leu Thr Asn
                245                 250                 255
Ser Ser Ile Pro Arg Phe Gly Val Lys Thr Glu Gln Glu Asp Val Leu
            260                 265                 270
Ala Lys Glu Leu Glu Asp Val Asn Lys Trp Gly Leu His Val Phe Arg
        275                 280                 285
Ile Ala Glu Leu Ser Gly Asn Arg Pro Leu Thr Val Ile Met His Thr
    290                 295                 300
Ile Phe Gln Glu Arg Asp Leu Leu Lys Thr Phe Lys Ile Pro Val Asp
305                 310                 315                 320
Thr Leu Ile Thr Tyr Leu Met Thr Leu Glu Asp His Tyr His Ala Asp
                325                 330                 335
Val Ala Tyr His Asn Asn Ile His Ala Ala Asp Val Val Gln Ser Thr
            340                 345                 350
His Val Leu Leu Ser Thr Pro Ala Leu Glu Ala Val Phe Thr Asp Leu
        355                 360                 365
Glu Ile Leu Ala Ala Ile Phe Ala Ser Ala Ile His Asp Val Asp His
    370                 375                 380
Pro Gly Val Ser Asn Gln Phe Leu Ile Asn Thr Asn Ser Glu Leu Ala
385                 390                 395                 400
Leu Met Tyr Asn Asp Ser Ser Val Leu Glu Asn His His Leu Ala Val
                405                 410                 415
Gly Phe Lys Leu Leu Gln Glu Glu Asn Cys Asp Ile Phe Gln Asn Leu
            420                 425                 430
Thr Lys Lys Gln Arg Gln Ser Leu Arg Lys Met Val Ile Asp Ile Val
        435                 440                 445
Leu Ala Thr Asp Met Ser Lys His Met Asn Leu Leu Ala Asp Leu Lys
    450                 455                 460
Thr Met Val Glu Thr Lys Lys Val Thr Ser Ser Gly Val Leu Leu Leu
465                 470                 475                 480
Asp Asn Tyr Ser Asp Arg Ile Gln Val Leu Gln Asn Met Val His Cys
                485                 490                 495
Ala Asp Leu Ser Asn Pro Thr Lys Pro Leu Gln Leu Tyr Arg Gln Trp
            500                 505                 510
Thr Asp Arg Ile Met Glu Glu Phe Phe Arg Gln Gly Asp Arg Glu Arg
        515                 520                 525
Glu Arg Gly Met Glu Ile Ser Pro Met Cys Asp Lys His Asn Ala Ser
    530                 535                 540
Val Glu Lys Ser Gln Val Gly Phe Ile Asp Tyr Ile Val His Pro Leu
545                 550                 555                 560
Trp Glu Thr Trp Ala Asp Leu Val His Pro Asp Ala Gln Asp Ile Leu
                565                 570                 575
Asp Thr Leu Glu Asp Asn Arg Glu Trp Tyr Gln Ser Thr Ile Pro Gln
            580                 585                 590
Ser Pro Ser Pro Ala Pro Asp Asp Pro Glu Glu Gly Arg Gln Gly Gln
        595                 600                 605
Thr Glu Lys Phe Gln Phe Glu Leu Thr Leu Glu Glu Asp Gly Glu Ser
    610                 615                 620
Asp Thr Glu Lys Asp Ser Gly Ser Gln Val Glu Glu Asp Thr Ser Cys
625                 630                 635                 640
Ser Asp Ser Lys Thr Leu Cys Thr Gln Asp Ser Glu Ser Thr Glu Ile
                645                 650                 655
```

Fig. 7.7

```
Pro Leu Asp Glu Gln Val Glu Glu Glu Ala Val Gly Glu Glu Glu Glu
            660                 665                 670
Ser Gln Pro Glu Ala Cys Val Ile Asp Asp Arg Ser Pro Asp Thr
        675                 680                 685


<210> 9
<211> 585
<212> PRT
<213> Homo Sapien

<400> 9
Met Lys Glu Gln Pro Ser Cys Ala Gly Thr Gly His Pro Ser Met Ala
 1               5                  10                  15
Gly Tyr Gly Arg Met Ala Pro Phe Glu Leu Ala Ser Gly Pro Val Lys
            20                  25                  30
Arg Leu Arg Thr Glu Ser Pro Phe Pro Cys Leu Phe Ala Glu Glu Ala
        35                  40                  45
Tyr Gln Lys Leu Ala Ser Glu Thr Leu Glu Glu Leu Asp Trp Cys Leu
    50                  55                  60
Asp Gln Leu Glu Thr Leu Gln Thr Arg His Ser Val Ser Glu Met Ala
65                  70                  75                  80
Ser Asn Lys Phe Lys Arg Met Leu Asn Arg Glu Leu Thr His Leu Ser
                85                  90                  95
Glu Met Ser Arg Ser Gly Asn Gln Val Ser Glu Phe Ile Ser Asn Thr
            100                 105                 110
Phe Leu Asp Lys Gln His Glu Val Glu Ile Pro Ser Pro Thr Gln Lys
        115                 120                 125
Glu Lys Glu Lys Lys Lys Arg Pro Met Ser Gln Ile Ser Gly Val Lys
    130                 135                 140
Lys Leu Met His Ser Ser Ser Leu Thr Asn Ser Ser Ile Pro Arg Phe
145                 150                 155                 160
Gly Val Lys Thr Glu Gln Glu Asp Val Leu Ala Lys Glu Leu Glu Asp
                165                 170                 175
Val Asn Lys Trp Gly Leu His Val Phe Arg Ile Ala Glu Leu Ser Gly
            180                 185                 190
Asn Arg Pro Leu Thr Val Ile Met His Thr Ile Phe Gln Glu Arg Asp
        195                 200                 205
Leu Leu Lys Thr Phe Lys Ile Pro Val Asp Thr Leu Ile Thr Tyr Leu
    210                 215                 220
Met Thr Leu Glu Asp His Tyr His Ala Asp Val Ala Tyr His Asn Asn
225                 230                 235                 240
Ile His Ala Ala Asp Val Val Gln Ser Thr His Val Leu Leu Ser Thr
                245                 250                 255
Pro Ala Leu Glu Ala Val Phe Thr Asp Leu Glu Ile Leu Ala Ala Ile
            260                 265                 270
Phe Ala Ser Ala Ile His Asp Val Asp His Pro Gly Val Ser Asn Gln
        275                 280                 285
Phe Leu Ile Asn Thr Asn Ser Glu Leu Ala Leu Met Tyr Asn Asp Ser
    290                 295                 300
Ser Val Leu Glu Asn His His Leu Ala Val Gly Phe Lys Leu Leu Gln
305                 310                 315                 320
Glu Glu Asn Cys Asp Ile Phe Gln Asn Leu Thr Lys Lys Gln Arg Gln
                325                 330                 335
Ser Leu Arg Lys Met Val Ile Asp Ile Val Leu Ala Thr Asp Met Ser
            340                 345                 350
Lys His Met Asn Leu Leu Ala Asp Leu Lys Thr Met Val Glu Thr Lys
        355                 360                 365
Lys Val Thr Ser Ser Gly Val Leu Leu Leu Asp Asn Tyr Ser Asp Arg
    370                 375                 380
Ile Gln Val Leu Gln Asn Met Val His Cys Ala Asp Leu Ser Asn Pro
385                 390                 395                 400
Thr Lys Pro Leu Gln Leu Tyr Arg Gln Trp Thr Asp Arg Ile Met Glu
                405                 410                 415
Glu Phe Phe Arg Gln Gly Asp Arg Glu Arg Glu Arg Gly Met Glu Ile
            420                 425                 430
Ser Pro Met Cys Asp Lys His Asn Ala Ser Val Glu Lys Ser Gln Val
```

Fig. 7.8

435 440 445
Gly Phe Ile Asp Tyr Ile Val His Pro Leu Trp Glu Thr Trp Ala Asp
450 455 460
Leu Val His Pro Asp Ala Gln Asp Ile Leu Asp Thr Leu Glu Asp Asn
465 470 475 480
Arg Glu Trp Tyr Gln Ser Thr Ile Pro Gln Ser Pro Ser Pro Ala Pro
485 490 495
Asp Asp Pro Glu Glu Gly Arg Gln Gly Gln Thr Glu Lys Phe Gln Phe
500 505 510
Glu Leu Thr Leu Glu Glu Asp Gly Glu Ser Asp Thr Glu Lys Asp Ser
515 520 525
Gly Ser Gln Val Glu Glu Asp Thr Ser Cys Ser Asp Ser Lys Thr Leu
530 535 540
Cys Thr Gln Asp Ser Glu Ser Thr Glu Ile Pro Leu Asp Glu Gln Val
545 550 555 560
Glu Glu Glu Ala Val Gly Glu Glu Glu Glu Ser Gln Pro Glu Ala Cys
565 570 575
Val Ile Asp Asp Arg Ser Pro Asp Thr
580 585

<210> 10
<211> 507
<212> PRT
<213> Homo Sapien

<400> 10
Met Ala Ser Asn Lys Phe Lys Arg Met Leu Asn Arg Glu Leu Thr His
1 5 10 15
Leu Ser Glu Met Ser Arg Ser Gly Asn Gln Val Ser Glu Phe Ile Ser
20 25 30
Asn Thr Phe Leu Asp Lys Gln His Glu Val Glu Ile Pro Ser Pro Thr
35 40 45
Gln Lys Glu Lys Glu Lys Lys Lys Arg Pro Met Ser Gln Ile Ser Gly
50 55 60
Val Lys Lys Leu Met His Ser Ser Ser Leu Thr Asn Ser Ser Ile Pro
65 70 75 80
Arg Phe Gly Val Lys Thr Glu Gln Glu Asp Val Leu Ala Lys Glu Leu
85 90 95
Glu Asp Val Asn Lys Trp Gly Leu His Val Phe Arg Ile Ala Glu Leu
100 105 110
Ser Gly Asn Arg Pro Leu Thr Val Ile Met His Thr Ile Phe Gln Glu
115 120 125
Arg Asp Leu Leu Lys Thr Phe Lys Ile Pro Val Asp Thr Leu Ile Thr
130 135 140
Tyr Leu Met Thr Leu Glu Asp His Tyr His Ala Asp Val Ala Tyr His
145 150 155 160
Asn Asn Ile His Ala Ala Asp Val Val Gln Ser Thr His Val Leu Leu
165 170 175
Ser Thr Pro Ala Leu Glu Ala Val Phe Thr Asp Leu Glu Ile Leu Ala
180 185 190
Ala Ile Phe Ala Ser Ala Ile His Asp Val Asp His Pro Gly Val Ser
195 200 205
Asn Gln Phe Leu Ile Asn Thr Asn Ser Glu Leu Ala Leu Met Tyr Asn
210 215 220
Asp Ser Ser Val Leu Glu Asn His His Leu Ala Val Gly Phe Lys Leu
225 230 235 240
Leu Gln Glu Glu Asn Cys Asp Ile Phe Gln Asn Leu Thr Lys Lys Gln
245 250 255
Arg Gln Ser Leu Arg Lys Met Val Ile Asp Ile Val Leu Ala Thr Asp
260 265 270
Met Ser Lys His Met Asn Leu Leu Ala Asp Leu Lys Thr Met Val Glu
275 280 285
Thr Lys Lys Val Thr Ser Ser Gly Val Leu Leu Leu Asp Asn Tyr Ser
290 295 300
Asp Arg Ile Gln Val Leu Gln Asn Met Val His Cys Ala Asp Leu Ser
305 310 315 320

Fig. 7.9

```
Asn Pro Thr Lys Pro Leu Gln Leu Tyr Arg Gln Trp Thr Asp Arg Ile
                325                 330                 335
Met Glu Glu Phe Phe Arg Gln Gly Asp Arg Glu Arg Glu Arg Gly Met
            340                 345                 350
Glu Ile Ser Pro Met Cys Asp Lys His Asn Ala Ser Val Glu Lys Ser
        355                 360                 365
Gln Val Gly Phe Ile Asp Tyr Ile Val His Pro Leu Trp Glu Thr Trp
    370                 375                 380
Ala Asp Leu Val His Pro Asp Ala Gln Asp Ile Leu Asp Thr Leu Glu
385                 390                 395                 400
Asp Asn Arg Glu Trp Tyr Gln Ser Thr Ile Pro Gln Ser Pro Ser Pro
                405                 410                 415
Ala Pro Asp Asp Pro Glu Glu Gly Arg Gln Gly Gln Thr Glu Lys Phe
            420                 425                 430
Gln Phe Glu Leu Thr Leu Glu Glu Asp Gly Glu Ser Asp Thr Glu Lys
        435                 440                 445
Asp Ser Gly Ser Gln Val Glu Glu Asp Thr Ser Cys Ser Asp Ser Lys
    450                 455                 460
Thr Leu Cys Thr Gln Asp Ser Glu Ser Thr Glu Ile Pro Leu Asp Glu
465                 470                 475                 480
Gln Val Glu Glu Glu Ala Val Gly Glu Glu Glu Glu Ser Gln Pro Glu
                485                 490                 495
Ala Cys Val Ile Asp Asp Arg Ser Pro Asp Thr
            500                 505
```

Fig. 7.10

Exon start			142207	444645	641649	736254	861791	1044051	1273404	1354347	1414511	1436943	1445217	1449835
Exon end			142328	444775	641878	737226	862202	1044190	1273709	1355128	1414702	1436979	1445290	1449884
		Exons	4D7-1	4D7-2	4D7-3	4D4	4D5	4D3	4D6	4D8	LF1	LF2	LF3	LF4
mRNA/cDNA variants	Isoform													
UO2882											•	•	•	•
L20969	4D4					•					•	•	•	•
AF012073	4D5						•				•	•	•	•
L20970	4D3							•			•	•	•	•
AF012074	4D2													
U50159	4D3							•			•	•	•	•
U50158	4D2													
U50157	4D1													
AJ250854	4DN3						•				•	•	•	•
NM_006203	4D4					•					•	•	•	•
AJ250852	4DN1													
AJ250855	4DN2					•					•	•	•	•
BC008390	4DN3						•				•	•	•	•
novel cDNA identified by deCODE														
RT-PCR	4D6								•		•	•	•	•
CAP-RACE	4D7		•	•	•						•	•	•	•
CAP-RACE	4D8									•	•	•	•	•

FIG. 8.1

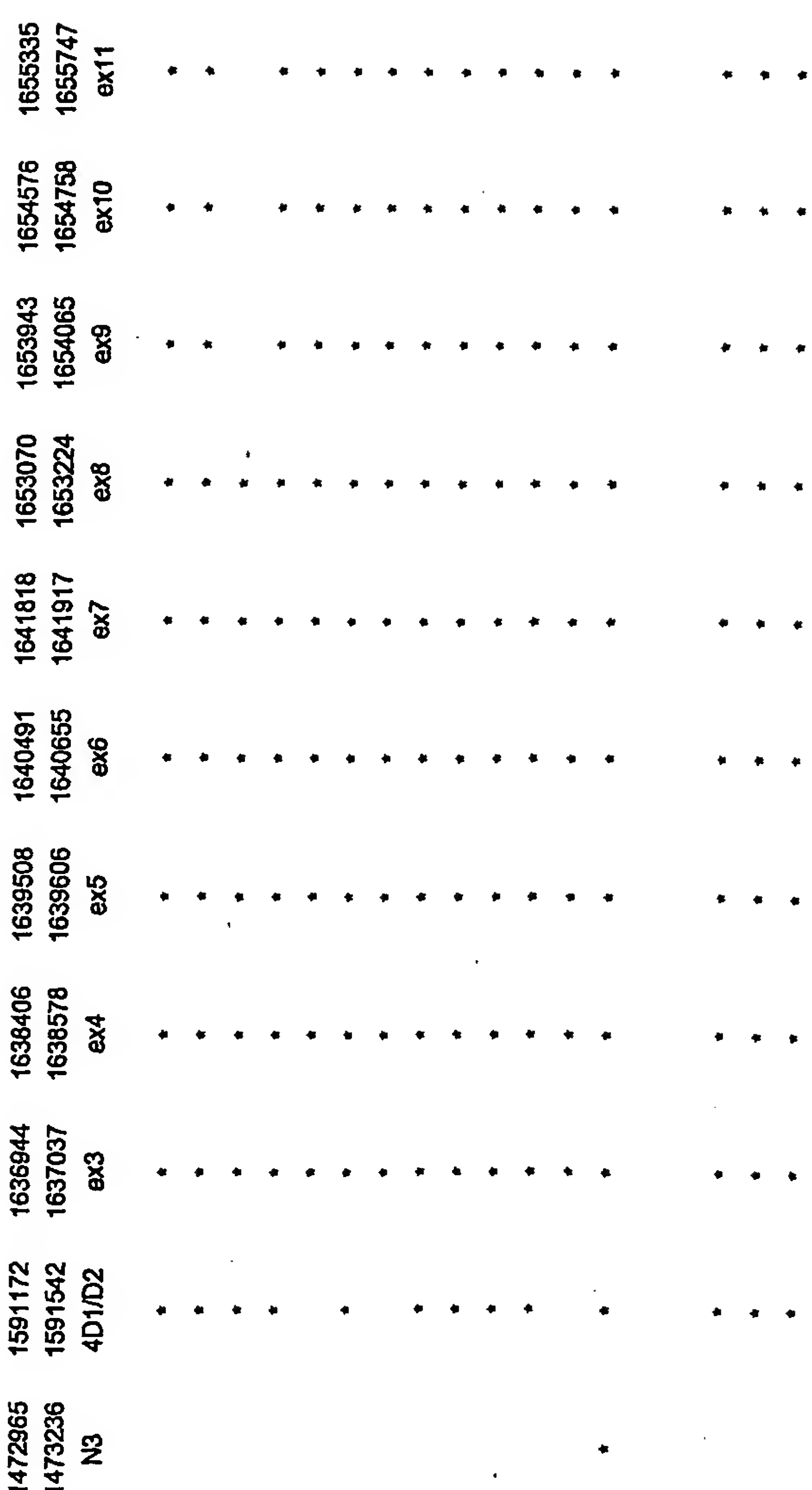
1472965
1473236
N3
1591172
1591542
4D1/D2
1636944
1637037
ex3
1638406
1638578
ex4
1639508
1639606
ex5
1640491
1640655
ex6
1641818
1641917
ex7
1653070
1653224
ex8
1653943
1654065
ex9
1654576
1654758
ex10
1655335
1655747
ex11

FIG. 8.2

>Contig_2 (1,1691140)

CATTTTTTGAAAGAACATCTGAAAGACAAAATGGGGAATGGCGAGTCTGTCTAATAAACCATTTTGAGAAAACTGGATA
TTCATATAAAGAAGTATAAAGAGGACTGTTATGTTGCACAATACACAAAAATCAACTCAAAATAAATTAATGACCTAAA
CTTAATATCAGAAATGATGAAACTTTTAAAAGAAAACATAGGGTGAATGTATGTTTAGGGAAACTCAAATTTATGTTCA
CAGGTTGCAAAAAGAAAAATATGAGAAAAACATAGAGGAAAATGATTCTGCCAATAAAGTGAGTTGGAAATAATTTTTC
TGTTTTCACAAAAATCATTGCTAACAAAAGCAAAAACAAGTGTGGGACTATAGAAAACTGATGAGCTTCTGCATAGGAA
AGAAAAGAATGAACCAATACAGAAGGCATCCAGTAGATTGGGACAAAATTATGGGGATTATATATCTGAAAGGGTTGT
TATCTAACATGTATAAGAAATTACCACTACTAAGTAGGAAAAACAACAACACAAAACAACAAATAACCAGATGGAAATT
GGGCAAAGAACCTGAATAGATGTTTCTGAATAGAAGACATGAATTTGACTACCAGGTAAAAGAAAAGGTTCTCAACATA
CCTAATCATCAAGAAAATGTACATTAAAACTCACTGAGATATCTTCTCCACTCTAATTGGAATTAATGTTACAAAAAAG
AAACAAATTTTTTACAATGAAATGATCAGTGTGGAGTTGGATGAAGGGGTACTATTACACTACTACACAGTGTAGGGTG
GAATTTAAGTCAGTATACACACTATGAAAAATAGTTGGAGTTTGCTCAAAAAATAAAATACAACTATCATTTGCTGTAG
TAATCCCACCACTGAATATACATTTTAAGAAAATGAAATCAGTATATTGAAGAGATACGTGAAATCCTACATTTCTTGA
CACATTATTCACAGCACTCAAGATGTGGAATCAACCTACCTGTCCAGGAACAGATGAAGAGATAAAGAAAATGCAGTGT
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CAGGGCCGGCCCCAAGTCATCCCAGAGCTGCCATGGCACCCCCTCAGTCGGGTCCTGAGGAATCCTACACAAGCTACTT
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ATTCACTTATTCCACTTCAAGCCAGCTAAATGATTGTTTCCCTGATGGCAAAAGTCTCAGATTGATTGCACAGTTTATT
TGGTTGGATTGTTTATGCTCTTTTTATTATTTATTCTTATTTCACCAATGAAAATATCACTAAGTTCTTTGGTTTGTTG
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GTCAGTAACCTCTTAGTGATGAAATAAAAAAGATTAGGTAATCATCCAGCAATGGGGAAGAAGTTAAGGAACAAAGAGC
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CCTCATAGATCACCCATGTGCTGAAGACTTTCAGTTCTGTATCTTCATTCTAGATCTCCTGAACTCAAGATCAGAATAT
CTTTCTGACTTCTGACTGTGTATTTCTGGATGTTATACAAGAACCTCAGCTCAAACTCAGTATTCCCTAAACCATTGTT
TTTGAAACTTTATGTTGGATGTGAAATCTGTATTGTAGAATAACATTAAAAAAAGAAAGAATAGTATGCAAAATATCAG
AGTGCATTGTATGTAGCAAGAGTAGGTATTTTCGTAAACTTTTTGTTTTAATTAAACACATATATATTTATTATTGCAG
TGTAAAATGTATTTCTTAATTTGGATAAGTGTTAGTGAGGATGTGGATAAATTGGAACTCTTGTACATTACTGGTGGGA
CTATAAAATGGCACTGCCGTTTGGTAAAACAGTTTGGCAGTTCCTCAAAAAGTTAAACATACAGTTAACATGTGATATA
GAAATTTCACTTTTAGATGTACACCCAAAAGAATTGAGAACATATGTTCACACAGCAACTTGTACACAAATGTTCATAG
CAGCATTACTCAGAAGAGCCAAAAAGTGGAAACAACTGAAATGTCCATCAAGTGATGAAGCAGTAAAATGTAGTATATC
CGTACAATGAAATATTCAGCCATAAAAAGGAATGCAATGTTGTTGCATGCTACAACAACTTGGATGAATCTTGGAAACA
TTATTCTAAGTAAAAGATTCCATTTTTATGAAATGTCCAGAATAGGCAAATCTATAGAGACAAAGATAAGTGGTTTCCA
GGGGTTGTGGGGAGGAGAGAATGGGAAGGTGACAAAATGTTCTGGATTAGATAATAGGGATGGGTATAACTTAGTGACT
ATACAAAAAAAAATCACTAGAATCATATACTTTAAAAAAGATATTCCCATAAAAAAAAGAACAAGCAAGAAAAAAATAACT
AAATTTGACTTTAGGAGTTAAAAAGAATATAGTATCTCAAATGAAAATTTTGCTGGATAGGATTAGGGGTAGATTAGAC
ACTCCAGAAGTTAAAGATCAGTGAGCTTGAATACACACAATAGAAGCTAGTCTAAACAAAGCACAGAGAGAAAAAAGAA
CAAAACAAACCTCCCACAACAAAACAAAACAAAAGCCAACCAAAAATACAGCCTCAATGACCTATGGAAATATTTAGC
AGTCTAATATACATGTAATTGGAATCCCTGAAGGAGGAGGGGGGTAGAATGTATCTTTTTTTGTCCCCTATGACTGCTG
TTAAGATTTTATTATTGATTTTTAGGAATTGCATTATATCTTGGTGTGGTTGTTTAAACAGAGGTATAGCTTATCAACC
AATGGTGGAGCTAAAATAGAATACTTGAAAGTACTTATGGATGCACAGAATCTAAGATGGCCCCCAATTTTCCTGCTAC

Fig. 9.1

CTTGTACCCTTGAGTATATGTGGACCTGTTACTTGCTTCTAACCAATAAAATCTCACACCAGTTAGAATGGTGATTAT
TAAAAAGTCAGGAAACAACGGATGCTGGAGAGGATGTGGAAAAATAGGAACGCTTTTACACTGTTGGTGGAAGTGTAAA
TTAGCTCAGCCATTGTGGAAGACAGTGGCAATTCCTCAAGGATCTAGAACTAGAAATACCATTTGACCCAGCCATCCCG
TTACTGGGTATATAACCAGAGGATTATAAATCATTCTACTATAAAGACACATGCACACGTATGTTTATTGCGGCACTGT
TCACAATAGCAAAGACTCGGAACCAACCCAAATGTCCATCAGTGATAGACTGGATGAAGACAATGTAGCACATATACAC
CAGGGAATACTATGCAGCTATAAAAAATGACGAGTTCATGTCCTTTGCAGGGACATGGATGAAGCTGGAAACCATCATT
CTCAGCAAACTATCACAAGAACAGAAAACCAAACACCACATCTTCTCACTCATAAGTGGCAGTTGAACAATGAGAACAC
ATGGACACAAGGCAGGGAACATCACACACCGGGGCCTGTGTGGGGGGTCGGGGGCAGGGGGAGGGATAGCATTAGGAGA
AATACCTAATGTAGTTGACATTACTTTGGTTTGACATTACTTTGGTTTGTGGGTGCCACAAACCACCATGGCACATGTA
TACCTGTGTTACAAACCTGCACGTTCTGTACATGTACCCCAGAACTTAAAGTATAATAATAATAAAATAACATGTATGT
CAAGGGTGACATGTAATTAAGCAAAGCTCAGTAAATTTAAAATGATTGAAATTGTACTAAGTTTTCTGACCACGCTAGA
ATTAAGCTAGAACTCCAGGTCCAGATGGCTTACTGATCAATTTTACCCAACACTTTGGAATGAATAATGACATTTGTAT
GAAAGTCCTTTCAGAAAATAGAAGATGAGGGAATATTTCCTGAACCATTTTATGAGGCCAGTATTGACATGGGTAATAA
AACCAACAAATACATTACACAAAAAAATTGTAGCACATGATATCCCTGATAAAACCAAATGCAAAAATACATTAAATTT
GCAAATTGAATGCAGCAGTAGATAAAAAGGACAATAATACATCATGGCCAAGTAGGGTTTATCCCAGCAAGGTAAGACT
GGTTTAACATCTAAAATCAATCAGTATAATTCATCATATCGATAGGATGAAGGAAAAAAACTCATGTGACCATCTCAAC
GATTGCAGAAAATGTATGTGACAATATTCAACACCCATTAATGATAAAAATGTTAAATACATTACAATAGAAGAAAACT
TCCTCAGCCTTATCAAGGGTACCTGTGAGAAAATTATGGATAACATTTTTCTTAATGGTGGTAGACTGAATGCTTTCCC
CTATGGTCAGAAAAAGACAAAACTCATCACTGCTATACAACATTTCATGAGAGGTCAGCAGTGCTTTCATGCCTTAAAG
GCATGAAAATGAAATAAGTGATTTAAGATTGGAAAGAAGAACTAAAACTACGTTTGCTGATATCAAAAATCCCAAGAAA
TCTGCCCCCAAAAAGCACTTATGAATTAATAATTAAACTTAACAAGGAAGCAGGATATAAGACCACTGTATAAAAATCA
ATTGGAAAACTAAAACAAAACCCCAAAAAACCCAACCTAATAATCTGTTTCCAATAACACCAAAAAACATGGAATACTC
AGGGATGAATTATAAGTAGGGATAAACAAGGTGTGTGCAAGACCTGACAATGAAAACTATTAAATGTTGTTGAGAGGAA
CTAAGGATGACTTAAATAACTGGAGAGACATACTATGTTCATGGACTGAAAGATATGCAATATTGATAAGATGTCAATT
CTTCCAAAATTGATACATGGATTATTTAGCTTGGTAAAAATCCAAGCTTTTTTTTGTAGAGTTTTCAAGCATTTTGTAA
AATTTATTTGGAAATACAAATAATCTGAATAGCCAAAACAATGTGGAGAAAAGGAGAAAAAAATTAGAGAACTTACATTA
CCTGTTTTTAAGACTTACTATAAAATCTTACTTTCAGGTGTGGTATTGGTATCTTACTGTAAAGTCTTCCTGTAAAGTA
TATTGATATTTAGTGTGGTGTTGGCATAAGGATAGATATTTAGGCCTATGGAATAGAATAGAGGGTCCAATAGTAGATT
CATGTATCTGTAGTCAAGTGATTTTCAGCAAAGAAGCCAAGGGAAGGGATCATCTTTTCAGGGTAGTGTTGGAACAACT
GGATATCTATTATGGAAAAAGTGAACCTTTATACTGTATACTGTATGCACTCAAATTTTACTTTGGACTGGATCACAGA
TTCAAATATAATAGAGATATCTAAAAACCTTCCAAAAGAAAGTATAGGAGAAAAATTCTTGCAATTTTGCATAGACAAA
GATATCTTAGTTCCTAGAAAACATAACCATAAAATAAAAATTACATCAAATAGACTTCATCAAAATTGGAAATTTCTAC
TCTTTGAAATATACTGTTAAGAAAATGAAAAGACAAGAAAATTCCCATTACATAGCTCACAAAATACTTATAACTAGGA
TATGTAGAGAACACTTCAATACTAAGACAATGCAATAAAAAAACAAAAAAACTGGACACAACAAGAATATATATGAAAT
ACTCATAAGCACATGAAAAGATTATTAACATCATTAATCATACAGGAAATGCAGATTAAAACCACAACGAGATACTACC
ATGTACACACTAAAATGGCTAAAGCCAAAGACACTGACATAAATTTTTGGTGAGTGTGGGGCTCCTGGAGCCCTCAGAC
ATTGCTGATAGGACTGTGAAATGACACAGCCACTTTGGAAAATGAGTTCATCATTTCTAACTAAGTTAAACATACACAT
ACCTTAATTTCATTCCTAGGTATTTATCTAAGGGATAAGAACACATGTGTTCACACAAATTGTGTGGTGTTCATAGCAG
CTTTATTCATAATATCAAAACATTGGAAACAATCTACATGTCTATCAGCAAGTGAATGGAAAAATATTTTGTAGTATAT
CCATGCAATGAAATATTACCCAGCAATAAAAATAAACTATGGGTACATACAACAATATAAATGAATCTCAAAAATATGC
CGAGTGATAAAAGCCATTCTGGTTCCATTTACATGAAATTCTAGGAAAGGGGAATCTATGGAGGCAGAAAGCAGGTCAG
AGGTTGCTTTGGTCTAGGGGATCGAGAGGCCTTACTGCCAAACAGCACCAGTAGATTCTTTGGGGGGGCGGAAGAGTTT
TATATTTTCATTGTTGTGCTGTTTACATGGGGATATGCATTTGTCAAAACTCACTGAGCTCTACATTTAAAATGGGTAC
ATTTTTGTAGTATTTTAATTATAAATCAAAATTGAACAAAAAAGTAACACATGTTATTTGAGGACTTTTTTTTTTAAAG
CATCATGTTTTATTTTTATTTTTTGCAGACAAGGGTTTTATTTAATATAACTCATAAATTACATTGCCAATATCCTAAA
GGTAATAAAGAAGTCAAAAGCACTATTTGTGAAAATCAGTATATCATATGACGGTAAGCATAGTTGCTATTCACCAAAA
ACGTTCAGAAAACATTTGAATTCATTGTCTGAAAGAGCTTAGGCTCAAGACTTGAATTACTAAGAAAAGAAAGTAGTAT
ATAATTATACAAAGATGAGTAATAACCAAAAACTGTTCTTTAATGCATGTTTGTTTTTCCTGAAAGCCATTTCTTTCTT
TTTTTCTTTTAATACTTTAAGTTCTAGGGTATACTTTAAGTTCTAGGGTACATGTGCACAACATGCAGATTTGTTACAT
ATGTATACATGAGCCATGTTGGTGTGCTGCACCCATTAAGTCGACATTTACATTAGGTGTGTCTCCTAATGCTATCCCT
CCCCACTCCCCCTACCCCAGGACAGGCCCCGGTGTGTTATATTCCCCTTTCTGTGTTCAAGTGTTCTCATTGTTCAATG
AGTGAGAATATGAGGTGTTTGGTTTTTTGTCCCTGCGATAGTTTGCTGAGAATAATGGTTTCCAGCTTCATCCATGTCC
CTACAAAGGACATGAACTCATCCTTTTTTATGGCTGCATAGTATTCCATGGTGTATGTGTGCCACATTTTATTTTTATT
TTTATTATTTTTATTTTTAAAATTTTATTATTATACTTTAAGTTAGTGTACATGTGCACAACATGCAGGTTTGTTACAT
ATGTATATATGTGCCATGTTGGTGTGCTGCACCCATTAACTCGTCATTTAACATTAGATATATCTCCTAATGCTATCCC
TCCCCCTACCCCGACCCCACAACAGTCCCCGGTGTGTGATGTTCCCCTTCCTGTGTCAATGTGTTCTCATTGTTCAATT
CCCACCTATGAGTGGCAACATGTGGTGTTTGGTTTTTTGTCCTTGAGATAGTTTGCTGAGAATGATGGTTTCCAGTTTC
ATCCATGTCCCTACAAAGCACATGAACTCATTATTTTTCATGGCTGCATAGTATTCCGTGGTGTATAGTGCCACATTTT
CTTAATCCAGTCTATCACTGATGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATAGTGCCTCAATAAACATA
CGTGTGCATGTGTCTTTATAGCAGCATGATTTATAATCCTTTGTGTATATACCCAGTAATGGGATGGCTGGGTCAAATG
GTATTTCTAGTTCTAGATCCTTGAGGAATCGCCACACTGTCTTCCACAATGGTTGAACCAGTTTACAGTCCCACCAACA

Fig. 9.2

GTGTAAAAGCATTCCTATTTCTCCACATCCTCTCCAGCACCTGTTGTTTCCTGACTTTTTAATGATCGCCATTCTAACT
GGTGTGAGATGGTATCTCATTGTGGTTTTGATTTGCATTTCTCTGATGGCCAGTGATGGTGAGCATTTTTTCATGTGTC
TTTTGGCTGCATAAATGTCTTCTTTTGAGAAGTGTCTGTTCATATCCTTCGCCTACTTGTTGATGGGGTTGTTTGTTTT
TTTCTTGTAAATTTGTTCGAGTTCATTGTAGATTCTGGATATTAGCCCTTTGTCAGATGAATAGATTGTGAAAATTTTC
TCCCATCCTGTAGGTTGCTTGTTCACTCTGATGGTAGTTTCTTTTGCTGTGCAGAAGCTCTTTAGTTTAATTAGATCCT
GTTTGTCAATTTTGGCTTTTGTTGCCTTGCTTTTGGTGTTTTAGACATGAAGTCCTTGCCCATGCCTATGTCCTGAATG
GTATTGCCTAGGTTTTCTTCTAGGGTTTTTATGGTTTTAGGTCTAGCATTTAAGTCTTTAATCCATCTTGAATTAATTT
TTGTATAAGGTGTAAGGAAGGGATCTAGTTTCAGCTTTCTACATATGGCTAGCCAGTTTTCCCAGCACCATTTATTAAA
TAGGGAATCATTTCCCCATTTCTTGTTTTTGTCAGGTTTGTCAAAGATCAGGTAGTTGTAGATATGTGGCATTATTTCT
GAGGGCTCTGTTCTGTTCCATTGGTCTATATCTCTGTTTTGGTACCAGTACCATGCTGTTTTGGTGACTGTAGCCTTGT
AGTATAGTTTGAAGTCAGGTACCGTGATGCCTCCAGCTTTGTTCTTTTGGCTTAGGATTGATTTGGTAATGCGGGCTCT
TGTTTGGTTCCATATGAACTTTAAAGTAGTTTTTTCCAATTCTGTAAAGAAAGTCATTGGTAGCTTGATGGGGATGGCA
TTGAATCTATAAATTACCTTGGGCAGTATGGCCATTTTCACAATATTGATTCTTCCTACCCATGAGCATGGAATGTTCC
TCCATTTGTTTGTATCCTCTTTTATTTCCTTGAGCAGTGGTTTGTAGTTCTCCTTGAAGAGGTCCTTCACATCCCTTGT
AAGTTGGATTCCTAGGTATTTTATTCTGTTTGAAGCAACTGTGAATGGGAGTTCACTCGTGATTTGGCTCTCTGTTTGT
CTGTTATTGGTGTATAAGAATGCTTGTGATTTTTGCACATTGATTTTGTATCCTGAGACTTTGCTGAAGTTGCTTATGA
GCTTAAGGAGATTTTGGGCTGAGACGATGGGGTTTTCTAGATATACAATCATGTCATCTGCAAACAGGGACAATTTGAC
TTCCTCTTTTCCTAATCGAATACCCTTTATTTCCTTCTCCTTCCTGATTGCCTTGGCAAGAACTTCCAACACTATGTTG
AATAGGAGTGGTGAGAGAGGACATCCCTGTCTTGTGCCAGTTTTCAAAGGGAATGCTTCCAGTTTTTGCCCATTCAGTA
TGATATTGGCTGTGGGTTTGTCATAAATAGCTCTTATTATTTGGAGATACATCCCATGAATACCTAATTTATTGAGAGT
TTTTAGCATGAAGGGCTGTTGAAATTTGTCAAAGGCCTTTTCTGCATGTATTGAGATAATCATGTGGTTTTTGTCTTTG
GTTCTGTTTATATGCTGGATTACGTTTATTGATTTTCATATGTTGAACCAGCCTTGCATCCCAGGGATGAAGCCCACTT
GATTATGGTGGATCAGCTTTTTGATGTGCTGCTGGATTCGGTTTGCCAGTACTTTATTGAGGATTTGTTCATTGATGTA
CATCAGGGATATTAGTGTAAAATTCTCTTTTTTTGTTGTGTCTCTGCCAGGCTTTGGTATCAGGATGATGCTGGCCTCA
TCAAATGAGTTAGGGAGGATTCCCTCTTTTTCTATTGATTGGAATAGTTTCAGAAGGAATGGTACCAGCTCCTCCTTGT
ACCTGTGGTAGAATTTGGCTGTGAATCCGTCTGGTCCTGGACTTTTATTGGTTGGTAAGCTATTAATTATTGCCTCAAT
TTCAGAGCCTGTTATTGGTCTATTCAGAGATTCAACTTCTTCCTGGTTTAGTTTTGGGAGAGTGTATGTATCGAGGAAT
TTATCCATTTCTTCCAGATTTTCTAGTTCATTTTCATAGAGGTGTTTATAGTATTCTCTGATGGTAGTTTGTATTTCTG
TGGGATAGGTGGTGATATCCCCTTTATCATTTTTTATTGCATCTATTTGATTCTTCTCTCTTTTCTTCTTTATTAGTCT
TGCTAGCAGTCTATCAATTTTGTTGATCTTTTCAAGAAACCAGCTCCTGGATTCATTGATTTTTTGAAGGGTTTTTTGT
GTCTCTATTTCCTTCAGTTCTGCTCTGATCTTAGTTATTTCTTGCCTTCTGTTGGCTTTTGAATGTGTTTGCTCTTGCT
TCTCTAGTTCTTTTAATTGTGATGTTAGGGTGTCAATTTTAGATCTTTCCTGCTTTCTCTTGTGGACATTCAGTGCAAT
AAATTTCCCACTACAAACTACTTTGAATGTGTCCCAGAGATTCTGGTATGTTTTGTCTTTGTTCTCATTGGTTTCAAAG
AATATCTTTATTTCTGCCTTCATTTTGTTATGTACCCAGTAGTCATTTAGGAGCAGGTTGTTCAATTTCCATGTAGTCG
AGCGGTTTTGAGTGAGTTTCTTAATCCTGAGTTCTAGTTTGATTGCACTGTGGTCTAAGAGACAGTTTGTCATAATTTC
TGTTCTTTTACATTTGCTGAGGAGTGCTTTACTTCCAACTATGTGGTCAGTTTTGGAATAGGAGTGGTGTGGTGCTGAG
AAGAATGTATATTCTGTTGCTTTGGGGTGGAGAGTTCTGTAGATGTCTATTAGGTCCACTTGGTGCAGAGCTGAGTTCA
GTTCCTGGATATCCTTGTTAACTTTCTGTCATGTGGATCTGTCTAATGTTGACAGTGGGGTGTTGAAGTCTCCCATTAT
TATTGTGTGGGAGTCTACGTCTCTTAGTAGGTCTCTAAGGACTTGCTTTATGAATCTGGCTGCTCCTGTATTGGGTGCA
TATATATTTAGGATAGTTAGCTCTTCTTGTTGAATTGATCCCTTTATCATTATGTAATGGCCTTCTTTGTCTCTTTTGA
CCTTTGTTGGTTTAAAGTCTGTTTTATCAGAGACTAGGATTGCAACCCCTGCCTTATTTTGTTTTCCATTTGCTTCGCA
GATCTTCCTCCATCCCTTTAATTTGAGCCTATGTGTGTCTCTGCATGTGAGATGGGTTTCCTGAATACAGCACACTGAT
GAGTCTTGACTCTTTATCCAATTTGCCAGTTTGGGTCTTTTAATTGGAGCATTTAGCCCATTTACATTTAAGGTTAATA
TTGTTACGTGTGAATTTGATCCTGTCATTATGATGTTAGCTGGTTAATTTGCCTGTTAGTTGATGCAGTTTCTTCCTAG
CCTCGATGGTCTTTACAATTTGGCATGATTTTGCAGTGGCTGGTACCGTATGTTCCTTTCCATGTTTAGTGCTTCCTTC
AGGAGCTCTTTTAGGGCAGGCCTGGTGGTGACAAAATCTCTCAGCATTTGCTTGTCTGTAAAGGATTTTATTTCTCCTT
CACTTATGAAGCTTAGTTTGGCTGGATATGAAATTCTGGGTTGAAAATTCTTTCCTTCAGGAATGTTGAATATTGGTCC
CCACTCTCTTCCGGCTTGTAGGGTTTCTGCCGAGAGATCAGCTGTTAGTCTAATGGGCTTCCCTTTGTGGGTAACCTGA
CCTTTCTCTCTGGCTGCCCTTAACATTTTTTCCTTCATTTCAACTTTGGTGAATCTGACAATTATGTGTCTTGGAGTTG
CTCTTCTTGAGGAGTATCTTTGTGGCGTTCTCTGTATTTCCTGAATTTGAATGTTGGCCTGCCTTGCTAGATTGGAGAA
GTTCTCCTGGATAATATCCTGAAGAGTTTTTTCCAACTTGGTTCCATTCTCCCCGTCACTTTCAGGTACACCAATCAGA
TATAGATTTGGTCTTTTCACATAGTCCCATATTTCTTGGAGGCTTTGTTCGTTTCTTTTTATTCTTTTTTCTGTAAACT
TCTCGCTTCATTTCATTCATTTGATCTTCCATCACTGATACCCTTCCTTCCATTTGATCGAATCAGCAACTGAGGCTTG
TGCATTCATCATGTAGTTCTTGTGCTGTGGTTTTCAGCTTCATCTGGTCCTTTAAGGACTTCTCTGCATTGGTTATTCT
AGTTAGCCGTTCGTCTGATTTTTTTTCAAGGTTTTTAACTTCTTTGCCATGGGTTCGAACTTCCTCCTTTACCTCAGAG
TAGTTTGATCATCTGAAGCCTTCTGCTCTCAACTCGTCAAAGTCATTCTCCATCCAGCTTTGTTCTGTTGCTGCTGAGG
AGCTGCGTTCCTTTGGAGGAGGAGAGGTGCTCTGATTTTTAGAGTTTCCAGTTTTTCTGCTCTGTTTTTCCCCCATCTT
TGTGGTTTTATTTACCTTTGGTCTTTGATGATGGTGACGTACAGATGGGGTTTTGGTGTGGATGTCCTTTCTGTTTGTT
AGTTTCCTTCTAACAGTTAGGACCCTCAGCTGCAGGTCTGTTGGTGTTTGCTGGAGGTCCACTCCAGACCCTGTTTGC
CTGGGTATCAGCAGCAGAGGCTGCAGAACAGCAGATATTGGTGAACAGCAAATGTTGCTGCCTGATCGTTCCTTTGGAA
GTTTTTTCTCAGAGGAGTACCCGGCCATGTGAGGTGTCATTCAGCCCCTACTGCGGGGTGCCTCCCAGTTAAGCTACTC

Fig. 9.3

GGGAGTCAGGGACCCACTTGAGGAGGCAGTCTGTCCATTCTCAGATCTCAAGCTGCATGCTGGGAGAACCACTACTCTC
TTCAAGGCTGTCAGACAGTGACATTTAAGTCTGCAGAGGTTATTGCTCCCTTTTGTTTGGCTATGCCCTGCCCCCAGAG
GTGGAGTCTACAGAGGCAGGCAGGCCTCCTTGAGCTGCAGTGGGCTCCACCCAGTTCAAGCTTCCCGGCTGCTTTACCT
ACTCAAGCCTGGGCAATGGCGGGCGCCCCTCCCCCAGCCTGGCTGCCACCTTGCAGTTTGATCTCAGACTGCTGTGCTA
GCAATGAGCAAGGCTCCGTGGGCATAGGACCCTCCGAGCCAGGCACGGGATATAATCTCCTGGTGTGCCATTTGCTAAG
ACTGTTGGAAAAGTGCAGTATTAGGGTGAGAGTGACCCGATTTTCCAGGTGCCGTCTGTCACCCCTTTCTTTGACTAGG
AAAGGGAATTCCCTGACCCCTTGTGCTTCCCAGGTGAGGCGATGCGTCACCATTCTTTGGCTCACGCTTGGTGTGCTGC
ACCCACTGTCCTGCACCCACTGTCCGACACTCCCCAGTGAGATGAACCCGTTATGTCAGTTGGAAATGCAGAAATCACC
CGTCTTCTGCGTTGCTCACGCTGGGCACTGTAGACTGGAGCTGTTCCTATTTGGCCATCTTGGTTCCATCCCCCCTACT
TTTGAGATTTTAAACTTGGGATGCCTTTGATTCATTTTATTCAAGTATTAATTTGAGTAAAAAGTCATGTATGTGCATG
AAGTATTAGCTGCAGTGGTGGTTTTGTTCTTCATAACTTTGCTCATAATAGCTTTGTTTATTTATTTATTCATTTATTT
ATTTTTGAGACAGGGTCTTGCTCTGTCACCCAGGCTGTAGTGCAGTGACATGATCTTGGCTGACAGCAACCTCTGCTTC
CCAGGTTCAAGTGATTCTCCTGTCTCTGCCTCCTGAGTAGCTGGAATTACAGGCATGTGCCACCATGCCTGGCTATGTT
TTGTATTTTTAGTAGAGACAGGGTTTTGCCATGTTGGCCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCCGC
CTTGGCTGCCCAAAGTGCTGGGATTACAGGCATCAGCCACCATGCCTGGCCTGCTAATAATAACTTTAAAAAACCTAAC
ATTTCATATTTGATAAATAAATGCAGTACTCATATCCAGTTGAAAGGGAAATACAACATTATTTAATAAACATATTAC
ATCTAAATATTAAAAAATTCCTATCATATGATAAATTAAAAAAAAGAGAAGAGATTAAGCAGGGGCTTAGAAACATAAA
CAAATATAAACAAACTTTACAAAACTGAATGGATTAGCAGGGTGTTGGGGCACATGCTTGTAGTTCCATCTCCTTGGAA
GGCTGAAGCAGAAGGATCCCTTGAACCTAGCCCAGGCAATAAAGCAAGACCCTGTCTCTTAAACAAAACAAAACACAAA
ACAAAACAGAGACAATTGGAGGAAGACAGAAACTAGAAAGAAAGTGTAAAAAAATAAAAACACCCCAAAACTCACAGAA
ATTAAAGTGATTTTTAAAAGTTGGGTTGTTTATTTGTTAACTATGAGCATGACCGCTCTACAGTCAGAAAAGATAAAAT
CAAGGCTCAGATGGGGAAACGCATGGTGCTGCTTTTAGAACCATGCTCAGAAAGATTTGGTGGAGTTTAAACAAACAAG
TTCAGACTTCTGTTGCCCTCTTTTATAGGAGTGAAAGAGAAAGGAAGGAAAGATTTACAAAGGTGTAAATCCCTTTCAT
CCCCTGGACCACAGAGGTGTAGCAGAGAATGGTTCCTGTAAGACTTGAAAACTGAAAGTACAACATAGGTGCAATTTGT
GACTAAGTATCACTGGTACAAAGAACTTAACTGATTGAAATATATCAATAAGTAATCTCTTGGGTGGTCATACAGGAAT
GCTTAAAACCTCAGACCCAATTAATGGCAAAACAATGACCCTACATCTGTTTTTTATGTATACACACACACACACACAC
ACACACACACACACACACACACACACACAAATACATATGTAACAACCTTTTTTCATGGACTGTCTTAGTTCATCTCATTTT
GAGGAAATAGTTGTTGAATGACTTCTGTGTGTTTCTGTGACATTGTATTAAGTATTCAAATACAGACTTAAAAAAGTAA
CTTCCTCTTATGGCTATTATATTTTAATATTCCTGAGGCAGATCATTATCGATTACCTGTCAGTCTCCTTGGGGTTTCC
ATGATATCCCCTTGACACATCTCTATTGTTGTCTTCCACATTGCTTTGTGATGGCTTCTGTTCGTTCATCTTCTTCTCC
AGACTGTGAGCTTCTTGATAACAAGATCTTTGTCTCACTGTTTTGGGATTCTCAGATCTTAGCACAGTCCTAGAACATT
TTATGCTCTTTTCAAACCTTCGTTGAATGAATACATTAATGATTCTCAAGTATATATTTCAAGTGTTGACCTGTCCCCT
AAATTCCAGAGCTGCTATCATCATCTTCCTGTTGAATATTTCCATGAGTCTACTATCTTTCACAAACCCAAACTGCTTC
TCTTCCGTGACAAATCAGCAGCCCCTTCTGGCTCCACTGTTTTTGAAGTAGGCCCCCTTAAAGCTGAAGATTCACAGTT
TATTTGTCCATAGTTGCCCTATCTTAGCACCCTATTTTAAAATGTGTTTTTGTTATGCAGACTTTGTAAGGGTCAAATC
ATGGCCTTCAAATCGATTTAGAGAAATTGAAATCTCGCAATGAATATCTCATGAGAAGAGAAGCATAATGAAGACTACA
AAAAAGCAATGCATTTAAAAAGTAGCATGTTGCTCCTGTGTGTGTATAGCACAAGAGAAGCTTAGAAGAGTGACGATAT
CTCCCAGCTGTCACACTTTTATTTTATATCCTTCAGTTATTTGTGGCAATGATGGAAACCAGAACAATATGATTGACAT
CCTTAGAGTATTCATAACACTATTCTTAGCTCGCATGTGACCTTGCATTCCCTCAGACCTTTCACCATTTCTCTTTTAA
ACAAATTTTTAAATTTTCTAACAATCTCCAGTTTACAAGAACGGCTATAGCACAGTCCAAAGACCTTTTTTTTTTTTTT
TTTCTGAACCATTTGAAAGTAAATTGCTAATCAAATGTTCTATCACCTATAAATACTTCTGTGTGTTTTTCCTACAAAC
TAGGTCACTTCCCTGCAGGACCCTCAGACAAGCATAAAAATCAGGAAAGTAACACTGATTACTTACTATTACTTACTAT
TCTTTTTTTTTTTTTTTTTTTGAGCAGATCTCAACAGTGGGCTTAAAATCTTCACTAAACCATGTGTTGTCATTTCTG
GAACACAGGTAGAATAGATGTAGCATAATTCTATTTTTTTTTTTTTTTTTAGGTGGAGTCTTGTGCTGTTGCCCAGGCT
GGAGTGCAGCGGCACAATCTTGGCTCATTGCAACCTCCACTTCCTGGGCTCAAGCAATTCTCCTGCCTCAGCCTCCCAA
ATAGCTGGGACGACAGGCACATGCCACCATGCCTGGCTAATTTTTGTATTTTTAGTAGAGATAAGGTTTCACCATGTTG
GCCAGGCTGGACTTGAGCTCCAGACCTCAGGTGATCCACTCACCTCAGCCTCCCAAAGTGCTAGGATTACAGGCATAAG
CCACTGCACCCAGCCAGATGTAGCATAATTCTTAAGGGCCCTAGGATTTTTGGAATGGTAAAGGAGCACTGGTTTCAAC
TTCAAGTCACCAGCTGTATTAGCCCCTAACAAGAGAGCCAGGCTGTCCTTTCAAGCTTTGAAGCCAAATATCGACTTCT
CCCTTCTAGTTACAAATGTCCTAGATGGCATCTTCTCCCATTAAAGGCTGTTTTTGTCTACATTGGAAATCTGTTGTTT
AATGTAGCCACTTTCATTATGATCTTAGCTAGATTTTCTAGATAACTTGCTGCAGCTTCTACATTAACCCTTGCTGCTT
CACCTTGCACTTTTATGTTATGAAGACAGCCTCTTTCCTCAAACCTCATAAACCAGCCTCTGCTAGATTCCAGGTTTTC
TTCTGTAGTTTCCCCACCTCCCTCAGCCTTTATAGAATTGAAGAGTTAGGACTTTTCTCTAGGTTAGGGTGGGGCTTAA
AGAAATGTTGTGATTGGTTGGATCTTCTATCTAGGCCACTCAAACTTTCTCCCTATCAGCAACACAGCTGTTTCACTGC
TTTATCATTTGTGTGCTCACTGGAGTGGCACTTTAGTCTCTTTCAAGAACTTTTCTTTGCATTCATAACTTGGCTGTTT
GGCACCAGAGGCCTAGCTTGTGACTTCTCTCAGCTTTTGACCTGCCACCCTTACTAAGGTCAATAGTTTCTTTTGATTT
AAGGTGACAGATGTGTGACTCTTCTTTCACTTGAACACTTAGAGGCCATTGTAGGGTTATTAATTGGCCCAATTTCAAT
ATTGTTGTGTCTGAGGGAATAGAGAGGCCCAAAGGGAGGGAGAGAGACAGGGGAACCACCTGTTGGTGGAGCAGTCAGA
ACACACACATTGGTTGATTAAGTTCACAGTCTTATGGGCATATTGTGTGGTTCCCCCAAACACTTACAGTAGTAACAGC
AAAGATTACTTATTGATCATAGGTCATAATAATAGATAAAATAATAATTAAAAAATTGAAATATTCTGAATTACCAAAA
TGTGATACAGAGACATGGTGTGAGCCCATGTTGTTGGAAAAATGGTGGTGATAGCCTTGATTAACACAGGGTTGCCACA

Fig. 9.4

AAACTTCAATTTGTAAAAAACATAATACCTGCAAAGCAACTAAAGTGAAGTGCAGTAAAACGAGGTTATACCTGTATAT
TAATAGGTGACTCCAATAAAGACTTCGGTAATCTATAACAAGGAGCCAACTATCAAATGGCAACTGCAAAGATAGTTCT
CTCACTGAAGCTAACAAAAACATCTACAAACTTTCAGCTGAAAAATCAAAAAAGTTTGAGTTGTATAGGACATTCTAAC
ACCAGGGAATGAGACATATCTTTTTGTATGTAATAATAATGCAAGCCTGAAAGTCTTCCAGTGACTCACAGAGTAATAA
CTGTGACAGAGGCTTTCTGAATTACACATGGTGAATTTTACAAAAACATAATATGTGGATGATGTTTACATAAGTTTAT
ATCTTCTTCCATACTATGTAATGTGGTTCTACAAATGTTTAGGTAATTAGGGTTTAGGAGGGTATAATTAAATGATTTA
TTATTCAATAATATGCTTGTGTTGGGACATTGTGGAATTTTACCTGCTATTGTTGTGAGGCCCGGAGCCAAATTTAATC
TTATCTATTAGTGCACAATATATTTCTTAACCAGATTTTAAAGAAAATCTAGCCAAAGTTGTATGTGATTCATGTTGTA
TCTTCCTCCTGATGTTAGTTTTAATGCTTTAAGATAGTAGTAGCTATGATTGATGCCACTGAAACTTTTAGTTCACTTG
ACTCCTCTATATAGCCCATGGATACCCAGTGTAGTACATTGATTTGGTTTTATGACTATTGACACCATTTTCTGATTTA
TGAAGGTTGACTTGTCCACAATCGGTGAGAGCTGGGATTTAATCCAGATATTCTGGCTACAATCCCAATAAGAGATGGG
TCATTCTTATCCTTCATTCATGTATTCATTCATTCATATCATTCATTCATTCATTCTTTACACAGAAATGTGTTGGTAC
CTATGATGTACCAGGTATTTTTCTAGCCATGGGAGGCATATCAACAAATGAAAATGATAAGAACCCCTACCCTGTGGAG
CTTACATTCCAGTAGGGCAGAGGGGAAACAATGGCAGATAACATAATAAGTAAATTCTGTAGTATATTAAGTGGTAGTA
ATGTATACTTGGAAAAAAGTAAGCAGGTAAATGGAATTGGGCATACCAATTTTATACCTCTTTGGAGGGAGATATGAAT
TAATTTTTCAATTTTATCTCATAAATTATGTCAAAATAATAGGTTTTGTCCCAAGCCTTTCCAAGCAGGTAGCCTGGAA
CAAGTGTTCTGCTCTTCTCCTCTCTCCCCACTACTCAGAACATTGCTATAAAAGATAGCTAAATTACAAGATCAACTTA
CAGAGTCCTACTTAATTCATTATGTAGCTCAACTGTGGTTCAAATCTAGTAGTGTTATAGACCTAACCAGTCCTTACAG
TGGGTTTTCTCCCCAGTCTGGTAAACTGTATTCCATGCTCCAGCTGCAGGTGACAGGAACCTCATCCTTTCATGCTGCT
CTTTTAGCTTTGGGAGTAAGCAACTCCCTCTCCTTCCACATTATCCAATATTGTGCGGCAGAGACTTGCTTCCATTAAA
GATACTGATAGTGGCTCCTCCACTGCTAGAAGCAGGAGGATGATCTTGGGGAATGATTATGGATTTAAAGGAGGAAGAG
ATAGTAGCATAGGCTTCTGTTTTCACAGGAAATAGGAAGGTTGACAGTTGGAAGAAATCGTAGAGGAGTCCCAGCTGGG
ATCAGTGACAGGAGGGAGGAAAAGGGAGGCCCTGGTCTCACAGGAAGGTTGAGTTATTGGGATGTTTATGAGTCAAGGA
TGGTCGCTTATCACCCAGTATGTAGGTTTCTGTAGATAAATTCCTGAGATGAATTTACCTATGCCTTCTTGCTTGATTT
CTTTTTTGCTTTTTCTTTCTTTCTCCCTTTCCCTTTCCTTTTCCTTTCCCAGGGTATTGCTCTTTTGCCCAGGCTGGAG
TGCAGTGTGCAATTATAGCTCACTGCAGACTCAAACTCATAGGCTCAAGTGATCCTCTTGCCTCAGTCTTCTGAGTAGC
TAGGACCACAAGCATGCACCACTATGCCTATCTAATTTTTTAATGTTTTTGTAGGGATGGGATTTTGCTATGTTGTCCA
GGCTGGTCTTAAGCTCCTGGCCTCAGGTGATCCTTCCATCTTGGCCTCCCAAAATGCTGAGATTATAGGTGTAAGCCAC
CATGCCTAGCCTCATTTAATTTTCATAAAGTCTGAAATTATTATCTACTCTAAGTTTGGCAAGCAACTGGTTGTTTAGA
GTTTAGTAATAATTTTTTGAAAAGATATAATGGATATAATTTTTACATATTTGTTTAATAGCATCCTCACAAAGAAATT
TTTAAATTTCTTTTATAGAATTCTGATTATTTTACAGCCCTGAGGTACTCTTAATTTTAAAATATATTTCTTTTTTAAT
ACATTATTTTTCATAAAGGCTTTATAATCAGCATGCTTTTATTTTTTAAAAATATTGTACTACTAATATTGTTGCATAA
CTTCAAAAATTATCATTTAGTAGCCATATAATACTGGCTAATAATTAACATAATATAATATAATAAATATAATATAATA
TAATATATAGTCTATTGATAAATAGGTATTTGAGTGTTTATCTGTTTGCCTTGTATTATACTAGGAAATGTGGCTTGCC
AAAATAAATGCATTATGCTTTCGGTTAGCTTGTAGTCTCATTCATAAAGCAATGTAGATACAATGCAGTAAGGATAAGG
TGAAATCTGCCTTTGCAAAGGGATTTTTAATTTGGAAAAAGAAGGGATTTGTGGGACAATGAGATAGAAGGCTTTACAG
AAAAACTAGATGGCTTTGTGGAGAAAGAGAATTTAACTAGTTATTACCAGTTCAACCGCTACATCCCCATTCAGACCAT
CAGCATACTGTGTGTCTTCCTTTTTCCCTGCTTTCCCCTTGCAATCTATTTGCTATACAGGTGCCACAGTAAAAAGCAA
TTCAGATCAAGTGACTCCTCTGTTCAGAACCCACCAGTGGTTTCTCAGGTCATTTATAATGAACCCCTCAGTCTTTAAT
GATATAGCCTACAAAGTTCTGCATGATCTGCCCCCTTGGCTGCCTCTCTAACCTGATTTCTGACTTGTGTTTTCCTTAC
ACACACTGTCTCTTGATGCTGGACGCATTCCTGTACGTCACACACTCCCAGCATGCTCTCACATTACAATGTTTGTAAT
TGCCATTCCCTCCACCTTGAAAGTTTGTCTCTGCAGTATTTCCCTGGCTTGCTCTCATTTCCTTTGGATCTCTGCTCAC
ATGTTACCTCCTTAGAGAGGGCCTTCCTGAAAATGATAGAAGTGTTTTTTTTGGAGCACATCCCCTCACTCCCCAGCTC
CTCTCCAGTGTATTTTTCTCCATAGCATCTTTCTGCCTGACCTTGTATTTCTATATCTTTTTGCTTTTTATCTTCTGGA
AAACAAGCTCCATGAGATCACACAGGGATTTTGCTTTATTCCTCACTGCATGTCCCCTCCTAATACAGTTCCTGGAATA
CAGGTGGGGGTTCATAAATATTTGTTGGGTAAATGAAAGAATATATTAAAATATTATCATAAACCTTTTTTCTTTCCAT
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ATCAGCACTTGGTCTAGAAAAGATCTGTCTTCTGCCCTCCTTTCCCGTCCATGCACATCCACTGCCTTTGGGATCAAAC
CCAATCTCCTTCCTCTGGCAGTCAGGGCCTTCTGAGACCTCATCTCTGTTGATCTTTCTAGCTTTACTTCTACCAAGTC
ATTCCCCTCATAACTGCATGTCATACTGAGTGGCTTATAGTTCCCCTCCTGTGGCCCTTGCAGATATTTCTTGCATTGC
TTTTCATTTGTCACTTATTTGTTTATGGGTTTCTCCTCACAGTGCATAAGCTCTTCAAAGGAAGAGGCCTGGTATATCT
TTGTATTTCTGGGATCTAGCGCAGTTCTTGTATATTGTAGATGGTCAGTAAATACTTATTCAATGTAAAAGATGTTTTT
TGCCTTCCAAAGACTAGTGGTAACTTGAAATGGTTGGATATAGGACAGATAAACTGATAGAAGCAGTTTTACCTCATTA
GAGGGCTTGGATATAAGTATGTCCAGGGACAAATATAGTAAAAAAGAGAGCAATATTATAATATCCTTTAAAAAAAAAA
AAAGAGACAGGTCTTGCTGTGTTGCCCAGGCTGGTGCCATTATGGCTCACTGTAACCTCAAACTCCTGGGCTCAAACAG
TTCTCCTCCTTCAGCTTCCTGAATAGCTAGGACTACTGGTGTGTGCCACCATGGCGGCTAATTAAATTTTTTTTTTTTT
TTTTTTTTTTTTTTTTTGTAGAAATGGGTTCTCACTATGTTGCCCAGGCTGGTCTCAAATTCCTGGCCTCAAGTGATCC
TCCCATCTCAGCATCTCAAAGTGCTGAGATTATAGGCGTGAGCCACTGTGCCTGGCTAGAATATCCTAACTTTTAGCAA
AATCATACCTGAGATGAGGAAGGATGGCATATAACATGATTGAATCAGCACACTTAACTAAGAAAGATAGCCTAAGTGG
AAAGAAGGGTTATTTGAAAGGCATTATTTAGAAAGAAGGGGAGCCATTTGGCAGTGGACTGACTATGTGGGCATCAGTC
CTTTATTTAGTCACTGAGAGTCATGCAAGGTGGTGAGCCTGCTGATAATGAGGAAATAATACAGAGGGGAGAATTCAGG

Fig. 9.5

GGAGTGATGACACGTTCACGTTCTTGCTATTTTGGACTTATTAACAACGTGAGTGTTGAGGGTTATGATAGTGTTAGCC
TGGCTGCTCCTGGTTCGGGAAAGAGTGCTATGAAAATTGAGATATATCTGTCTAGTGTATGGGAGGAGAAAATGGCTGT
ATTTGGTTCTATATATTTGTCATGCCTGGTTGATGGTTTGTATTTTCTATAGTGATTTGTGAGTGACAATGGATCTATA
TTCAATTGACCCAGTATAGTTGAATATGTGAAAATATTTTATGTAATTTTACTAATATATATTTTGTTAAAATACAACC
ATATAGAATCTACTAGGCTATAGGTGTTGAAAGATAACATTTTTTTTTTTCTAAATCAGGTTTGTTACAGAAGGAGAAA
GTGGCAGTTGAAGCATTTCAGATTTGCTGCCTTCTCCTACCTCCTGAAAATAGGAGAAAGTTACAGCTATTGATGAGGA
TGATGGCAAGGATTTGCTTAAACAAAGAGATGCCACCCCTGTGTGATGGCTTTGGTACCCGAACACTGGTAGGTTGATT
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AAGCAGACTTGCTTAAAAGAGCCACAGTCAGTGTCCACCCAGACTTGTGTCGTGCTTTTGTTCTAAGTGTCTTAAAGAA
CATAATGAGAAATGGAGACTTGAGTAGGGGCAGACTCTGTAGAGAGATCTGCTACATCCTGTTCTCCCACTTAAAATTA
TTTTAAATTTATTCTTAATTGACAACTAATAATTGCATATGTGATGTTTTAATTCATGTATACATTATAGAGTCAATCA
AGCTAATTAACAGATTCATTACCATACCAACTTATCATTTTTTTGTAATGAGATCATTAAAAATCTATTCTTTTCTCAA
TTTTGAAATATACAATATATTATTATAATTGTCGTCACCGTGCTGTGCACTAGAGCATTAAGACTTGATCCTCCTGTCT
CACTGGATCTTTGTACCCTTTGACCAACATCTATTTCCATGTCCCTGTATCCCCCAGCCTGTGGTACCTACCATCTAAT
CTCTGCTTCTATTGGCATATGTTTTTAAAGAGAGTTTATTTTAGAATTTACTTACTAGCAAAATCTCTTGATTTTCCTC
AAAAAATGTCTTTGAGCAAAACTGGTGCTTCAGTGGAATGTATGTGCTTTCCATATCCTGTTAAAACACCGTGTACTCC
CTGGGGATTCACTGGCCCAGTTTTAGAAGTAATAGAGTGAGATCAGAGGAGCACTTAGTGCCCAGTAGGATTCTTGATC
TCTATATTTTTTTGGAGTGAGTGGATGGTTAGAGAGGCTAATAGACCTTTTTGAAAAGCTGAAGAAAACTTTATATCTA
TTCTGCATATAAAATACACATGCAAAACTTTGCATGCAGTTTCAAGGCGATCACAGAGTCCCTGGGGTCCATGGTCTCC
AGGCAAAAAATTCTCTGCCTGTGTGTCTCTCTGTACATGTAAATGTAAGTGAAGATCATTTGCAGTGTGTTAATGAAGT
GTTACTAAGCAGAATTACATGATTTTTTGCTTAAAGATTTTGAAGGAAGATTGTCAGCAATAAAAGTAGTAGGAAAAAA
CAAAACAAAACAAAAGCCAGTCCAAAGAACAGTATTAAGAATGGAGTAGTTAGGCTGGGCGTGGTGGCTCACTCCTGTA
ATCCCAGCACTTTGGGAGGCCGAGGCAGGTGGATCACCTGAGGTCAGGAGTTCTAGACCAGCCTGACCAACATGGTGAA
ACCCCGTCTCTATTAAAATTACAAAAATTAGCTGGGCATGGTGGCAGGCGCCTGTAATCCCAGCTACTCGGGAGGCTGG
GGCAGGAGAATTGCTTGAACCTGGGAGGTGGAGGTTACAGTGAGCCAAGATCACACCATTGCACTCCAGCATAGGTTAC
AGAGCGAGACTCCGTAAAAAAAAAAAAAAAAAAAAAAGAATAGTTAATTTCAATTCTATGGAAATTATTACATTGATGCT
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TGTATGTGTGTGTATATATATATATATATATATATATATATATATGTATATTTAAAATCGTGTAAAAGGAGGTTTAAAA
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ACCCATCTGAGATGGCTGGGTACTCTTGGTAGAATATGCACCCTGTGCCTTAGACCATTTCTCATATTTGCCTTTTGCA
AATTAGATTGCACTCAGTTCAGAAAAATACTCATCTGCGTTTACCCCCCACCCCGCTCTTTTTTTAGATGGTTCAGACA
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TGGACAATTACCAGGAAATTCTGAAAGTCCCTTTGGCCTTGCAGACCTCTATAGAGGAGCGTGTGGCTCATCTACGAAG
AGTCCAGGTAAAGGAGAGGATATTATCAGTTCTATGAAATTGGCAATATAAAGTCACGTAAGCTTGCTAGGCTTCTTGG
GGCATTTTATTATGAGGATTAAGTGAATTAATGTTTATAAAGTACTTACAACAGGTCTTGGCACATAGTAATCCCCTGC
ATGTGTTTGTATTATCATTGAAAAGTTTACAGAATGCACATTTGGTTTTGTGTATCAATCCATGTGGCATATTTTTTAT
TGCTAATTCCTTGAATGAGTTTGTTTAGAATCTACATACACCTACTGATGGAAATGATTTTATGTGCAGTAAGTGTCTT
GATTCATAATTGCCCTGTGACCTAGTTTAATATTCCCACTTTTTGCATGAAAAAGCTAAGGCACAAAGAACTTAAATAA
CTTCGCTTAAGGCCACAGAGCCAGAATTCTGACTGTTGCAGTCAGCCTCTGTAATCAGTGCTCTAAACTATCATTCCAT
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ATCCTTTCTGTCGTGTGACTCTGGGCAAGTCCCTTAACCGCTTTGGATTTTACTTTCTTTCCTCAGGCGTTAAAATGGG
CTATTCTTTCTTTATAAAGTTGTGAAGATTAGAACACTGTACTTTACAATTCCTAGGATGAATTTCTGACATATGTCAG
GTATTCTTTGAAAGGTAGCTGCTGCTGTTGTCATGGTGGTTATATAAAAACAATGCAAAAGAAATATAATATATTATTA
TCGTGTGGACCCCAAAGTGGGGTTTGTATGTCAGCCTGTGGGAGCAGAAACCTGGTAAAGGCAGGCAGAAGGTCCACTT
GACTCCTTCTGACTGATTGGACCTCTTCTCATTTGAGATCTTTTTGAGGCACCACAATCAAGGACCAGTGAACTGCCTC
CTTCTGAGGTATTACAAAAATAATTAATTGTCCAGCTGTTTCTAGAAGGCAATTTTAAAATTAAAATTTTTTCTATTTT
TTTGCAATTATCAACCTAACACATTGAAGAAACTTGGGAAATATAGAAAAAACACACCAAAAAGTATCAGAGTTACACT
AAAATGTTCATAGTCAGTAATATAGTCTTTCAGATTTTTTTTTCTGTGTCTGTCTGCTGTCTATGTCCATGCCTACCTT
ACTTTCTTCCCTCTCTCTTCCCTCCCCACCCTCCCTTCCTTCCTTCCCTCCTTCCCGCCTTCCCTGCTTCCTTCTTGCC
TGCCTCCCTTCCTGCCTGCCTCCCTTCCTGCCACTTACATTCTGTTAACAATGAGAAAAAAATTCCCCCATCATTAAAT
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TCACCTTAGGCAAATTATATAACATGTCTGTGCTTCAACATCTGTCCCAACATTTCTTTTTCTCATCTGTAAAATGGGA
ATAATAGTAGTTAATATTTACCTCATAGAGTTTTTCTGGGGAATTAAAACATGTGATTAAAATACATGTGGGCTTAATA
CATGTGAAATGCTCACAATAATGTTTATCACATTGTAAACCTACAATTAGTAGCTGCCTTTGTTGTTGGTATCATCATT
ATTGTTATATTATTCCATAATAATATTATTGGCAACATAGTATTCCATAATATGGATATACCATAATTTATTTAAATGA
TACTTTTTGGTTGGTATTTAGATTGTTTTCATGCTTTCCCCCATTTTGGAAGCAATATAGCAGTAAATATTTTTAAAGG
TAGATTTTTTTTGGCTAATCTGTGATTATTTTTTAAGAATAAACTCCTAGGGGCAGCATTGCTTGGCCAAAGGCCATGA
ACATATTTTAAGTATCTATAGCATATTGCCAAATTTAGAATGATCATTTCAATTTACATTTCTGTCAGTGGTATAAGAG

Fig. 9.6

AGTGTTCATTTCTTTGCCCCTTTGCCTACTTTGGATATTATCATTAACACTTGTATATATCTTTGCCACTTGCATGGGT
GAAAAGTGTAATTTTAACTGCTGTTTTAGTTTAATTTTTTCCTCTGATATTTTTATGAGCCAACCCTAAAGAAAATAAA
AATGAACAGAAATACTTCACCAAGTTTCTGCAAGGAAATGTTATAGCAGTGTATTAGTCTGCTCTCATGCTGCTAATAA
AGACATACCCAAGACTGGGTAATTTGTAAAGGAAAGAGGTTTCATTGACTCAGAGTTCAGCATGGCTGGGGAGGCCCCA
GGAAACTTACAATCATGGCAGAAGGGGAAGCAAACACATCCTTCATGAGGCAGCAGGAGAGAGAAGCACCGAGCAAAAG
GGAGAAAAGCCCCTCATAAAACCATCAGATCTCATGAGAACTCACTCACTATCATAAGAACAGCATGGGGGGAACCACC
CTGTGATTCAGTTACCTCCCATCTCCCACAGCAAGGGGATTATGGGAACTACATTTCAAGATGAGATTTGGGTGAGGAC
ACAGCCAAACAATATCAAGCAATAACTGTGTTGCCCTGTATACTTGCTAGGTTTGTGTATTCACATGCATAGCACAGGC
ATATATTGTAGTAACTTAGCCTTGTGAGCCCTTTGCTATTACTTGAAGTTCAGAAGGCTGAGCTATGGTGATTAATTTA
ACTGCAGGTAAACATGATCTTGTTAAGAGACACTGCAGTGTGCTCTGAATAAAATCAGTAGTGATTCATTTGTCCAGTT
ACCTTTTCTCTCTTGCAAGTACATATTAGAATTGCCAAGCACCTGTTCCATTCAGCCCTCAGAACCTATAGATCTTTGT
TCTTTTGATTAGGCTCCTAAGCCTCTACACTGTATCACATTTAGGGGAGTGCTTCTCTGAAAATGCAGTGTTGCTTGGA
TTATTCCAGTGATTGTTTTAGGACAGTTTCAGGGCTGACCCTGGGATACATTATTAGGTAGGCAATGTTTTTGACACAA
GCCTTCTATGATCCTCATCTGCAACCTTCTATTTCAAAGGACTCCAGGCTCTGAAATTAAATATTTTTAATGTATGTTC
ATTTATTCACAGGCCTTGGTTTCCTTTTTCCTCTTATTTCTCTCTTCTCCCTTATCCCTTCTGCAATGTCTGCACCTTT
GTTGTTTTACTTGATTCTCATGGGTAAGATGTTAGGAAATGATTGTAGTACCCCTCTCTTCCTAAAAGCTTAGCTAAAT
GCNTGCCACTACCATCCCCAAGGCATTGAGAATCACACTCTTCAGATGTGGGAATGCGCCTGGATAGTTCCAGTGGATA
TCCAACATTATCAATGTTTTGAATCANTTTAGTCAATGTGTTTAATTTATGCTTGAATTTCAGATCTTGTTAAAAGAGG
GAATGCCGAGACCAGCTCGGTCGTGGAGACCCTAACCCAGTGGCCCTAGAGGAATTAAAGACACACACACACACACACA
CAAATATAGAATGTGGAGTGGGAAATCAGGGGTCTTACAGCCTTCAGAGCTGAGAGCTTTGAACAGAGATTTACCCACA
TATTTATTGACAGCAAGCCAGTCATAAGATTTACTAAAAGTATTCCTTATGGGAAATAAAGGGGTGGGTGAAATAAAGG
GAAGAGCTCTGGCTAGTTATCTGCAGCATGAACATGTCTTTAAGGCACAGATCGCTCATGCTATNGTTTGTGGTTTAAG
AATGCCTTAAGCGGTTTTCCGCCCTGGGTGGGCCAGGTGTTCCTTGCCCTCATTCCTGTAAACGGACAACCTTCCAGCA
TGGGCATCAAGGCCATCACGAGCATGTCACAGTGCTGCAGAGATTTNGTTTATGGCCAGTTTTGGGGCCTGTTCCCAAC
GAGGGCACAAGCTTTTTTTGTTATTGAAATGGCTCTTGGGTTTACAAAGGTAAAAATCCAATTTAAAACCGTGGCTTTA
AATAATAATATTTTGAAGTTATGGAAATACTTTTACTTTTCAATATAGAGTTTCCCCCAATCAAATTTTGAGGACTAAC
ATGGCATTGCTACGGTACAAGGAGATATCCTGTATTTGATCTAAACTAATTCTTATAATTTATTTGAAAATATGCTATA
TTCTTTCACTACTAATCCTTTTGCCTCAGATAAAATACCCAGGAGCTGATATGGATATCACTTTATCTGCTCCATCATT
TTGCCGTCAAATTAGTCCAGAGGAATTTGAATATCAAAGATCATATGGCTCTCAGGAACCTCTGGCAGCCTTGTTGGAG
GAAGTCATAACAGATGCCAAACTCTCCAACAAAGAGAAAAAGAAGAAACTGAAGCAGGTAAAAGGATATTCTTTATAAG
CCATTTTTTCTCCTCCCTACTGTTTTTATGTTTTTTTTTTTATTTTAATAGGCTTCATGTAAATCTCATCTTCTGAGCC
ATAGCAGTTTTCTAAGTATATTAGTTCATACATTCTAGAAGTCTCACTGATTTACACACTTGTGGTCAGTATCCTAGAT
CTTTATTCTTCAGTGTAAATCTGTTACCATTGCCAAACTCTTCATTTTTGGAGCTATTCTCTAATATTTGTCCTTTGTT
TTGGTATGTGGCATGATGTGAATTAGCAGAGCATCTGCTTTAATCTCAGAGAAGCTATCAGTGAGGGTGGATTTCTTTT
CATGTTTTCAAAAGGCAAATCAGATGGAATTCACAGGTGTAAAATGTTTAGAGTTTAAAAGCCGTTGGTTTTAGATAGC
CACTATCAAATTAGTTTCTTGCCTCAGGTATCAGTACAAGTTTTTAGTTCCTCTTATGTTAGGGGAACACAGCTTAGGG
TTCCAGCGAATCGTTTTTAACTCACAATATGTTACTTTTGACTATTCATAAAGGTTGATCCATGATCAGGTGAGTGGTT
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CCTCTCTTTTAAGCTTTTCACAAAGTAATATACACCAGAATATTCCCTCTTCCATTTGAGCAGAAGCTGGTGGGGCTGA
GTTGGAGAAACAGAGAAATGATGAAATGTAATTGGGCCAAAATTTTATTTAACTGTGTAGAACAGAAGTTATTTTGAAG
TCAGAGTTACTTGTGAATATATATAAAAAGTGAGGTCTATTTATAGTTGGCAGTGGGGGGAATTTTCAGAAACATGATTAA
AAGGGGAACTTATTTGAAGCTTAGATCAAAGGAAAGATGGATTAGCTCTATAGAAATTGGAATGAAATGTTTTAACAAA
AATAAACAAAAACAGGAAAATACAGGCTCAGAAACTCTTAAAATTTGGCTGCCAAATTTTATTGGCTTTTATGTGTCTT
TTTTTACTCTTCTTGGACCATTCATTTTTTTAGTTTCAGAAATCCTATCCTGAAGTCTATCAAGAACGATTTCCTACAC
CAGAAAGTGCAGCACTTCTGTTTCCTGAAAAACCCAAACCGAAACCACAGCTGCTAATGTGGGCACTAAAGAAGCCTTT
CCAACCATTTCAAAGAACTAGAAGTTTTCGAATGTAATAATACTTCCACAGCAACAGGTGCTAGAGACCACTGTTGTTG
TTTTGAGTGAATGGTGGTTAGGAGAAAGACTTTGGTGGTGGAAGAAAGAAAAGCATAAAACAAAGACTACTGAAATATA
GATAAAGATTGCCTTAGTTTTTAAAAATGTTTGGCCATTAGTATTTTTATAAAACTCAATGCTAGTTTTAAAGTGTATA
AATTGGTTAAAATTTATGAGTCAAATATATAGTGATAATGTTAACATGTTTGTAATTGCTACAGAATTTAAGGGTATTT
TTATCTCTGTGCTTTCTTTTTCATGGTGTTTATTAAATAATTGTGTATATACATCCTAGCTACTGATATCTTTATTATA
GCCTTAAGACTTAATTTTAAGTCTTAAAAATAGCGTGTATACTTGAATAAGAAAGACACTGGGTACTGTTACTGTGATG
CTATTGACTTAGTAGCCAATTATCATTTCTCCTGTATAAATTCCAGTTTTTATTGCTGCACATAAATTTTTTAATGTCT
TATATTGTGATAGCTATGTCTTTTATTGCAGATTTATTGGATGTTATGACAGATTTACTAAAGCTAGTGTTTTTATAA
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AAAATGGAAAGTTGAACTGGATAAATTCTTTGGGTACCCTTAGACCTCTGATTCTAAGTCAAATGCAAATGGGTTAAAT
AAAATGAGACTACTTCCTTTATAAATATATTTTCATCCTTTTGAAAGTAAGTGAAATGTAAATAAACTTATTTTTTTTA
AAAATGCCATACCTCGTGTTTCTTTTTTGGCATTTATTTAGATCAGTTAGAGAGCATCCTCAAATGCCTTTGCCAATGG
TCTTCATCAGTCATTTATTTCTATGAGAAAATGAAAAGTAAGATTTGGGCTTTTGTACTGACTGGTCTTTAGGTGAGCA
CTTTGCCAATTTTTTAGCATTGCTTTGTCCTTTTGTAAAATTGTGGTGCACTTGGATTATGGAGCATCTGAAAGTCTTC
CTCTGAGCGCAATTACCCAGAAAGCTGAGAGCAACACCCACTAATTGGCTTACAGTACTCCTTGGACTGATTTTTCCTT

Fig. 9.7

GCACTTAAGATTTGCTCCTGTTCTCTTGTAGCAAAATACCTCCTACATCTGATGCAGATTTTGCTTTTAAAAATGGACC
AAAGTATTCCTATTGGTTTGGGTACCACCTTACATTCCAAATACATAATGTAATGGGAGATTTTTAGTGTTTCAGGATT
CATTCTCAGACTTTGGCATTCTGTTTAGAGCCAAGAATAATTCTTCTTTCTGCTCTATTTTCACTCCGAGGTAGAGTTT
ATTTTTCAGAATCTCTTTTCCTGTTGCTTGTCTTTGGAAGTATATGTGGTTGTTTTCTTTCCTTTTTTTTTTTAAGATTA
CTTTTTTAAAAAAATATAACATATTTATGGAGAGATCATAAAACATAAGCACCAATTAAGTGTGAAATTGATGAATAGA
TAATAGCAGTTATCCAAAGTGGTTGTCCCAATTAACGCTCCCATTAACAGTGTATGAGAACTCCTTTTGTTTAATATCC
TCACCGAAACTTGCTATCGTCAGAGTTTGAAATGTTGTCAATGTGGTGGTTATTAATAGTGTCTGATTATGGTTTTATT
TTGCATTTCCATGATTATTAATATGGCTGAACATTTTTTTCCATTTTTTTGACTTTTTCGTCTTTGTACAAATTTTGGT
ATCAGATTGTCAAGCCTNCATACACACACACACACATGCAGAGACACACACTCACCCTGTTGAGTTTTTTTTTTTAATT
TTGATTGTATTATATGTATAAATCAATTTGCAGAGAATTGCTGTCTACAATATTAGGTCTTCTAGTCCATGACCATGGT
TTACCTTTCCATTTTATTTGAAATAAATGAGAAAAAAAGTTGCTTTTTTCTGTGAAGATTTACAAATCTTTNGTTAGAT
TTGTTCCCAAGTATTTGATACTTTAAAAAAAGTATCAAAATTTTCAAAGACTGTAGTACCCATTTCCTGTTTCAACAGT
TACTCAGCTGATCAATGTTGACGTTTAATTCTTTTGTAAATGCTGGTGTTGTAAATTTCCTTATAGTGTTTGTTGCTTC
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TGATTCTTTGGCATTGTCTACNTATTAGGAAAAAAACAGCTTTTGCTTTTCCGTTCCATGGTAGACAGCATCTATATTG
TCCTCAGTGATCCTTGCCTCCTGGTATTTAATGCCTTGTGTAATTTCCTGTCCTTGAGTGTGGGTGGAGCTAAAATGAC
ACATTTCTAAATAATAGAATATATCATCAGTGATGGGGTATCACTTCTCAGATTAGATTCCAAAACTCTGGCTTCCATC
TTGCTTGTCTTCCTTCTTATTCTCTCCCTGGCTTGCTCTGAGGAAAGCCAGCTGTCATGTTGTGAGCTGCCCCTTTCAGA
GGCCCACCAGGCAAGGAACTGATGTCTCTGGCCAACAGCCAGCGTGGACATGAAGCCTGCCAACAGCTTTACGAGTGAT
CTTGGAAGTGGATCTTCCCTTGGTCAAACCTTGAGGTGACTCTACCCTAGCTGACACCTTGATTGGAGACTTTTGAGAA
ACTCTAAGCCAGAGGACTTAGCAAAGCTGTGCCTGGATTCCTTATTCACAGAAACTGTGATATAATAAATGTTTATTGT
TTTAACCCACTTAGTTGAAGAATAACTTGTTATAAAGTGACCTAGATACAATATACTTTCCAATCTCCATACCCTTCCC
TCCCTTCCCTTCCGTCCCTTCCCTCCCTTCTCTCCCTTCCCTTCCCTTCCTTTCCTCCCTTCCCTCCCTTCCCTCCCTT
CACTTTCCTTCTTTTCTTTCCTTTCCTTCCTTTCCTTCCTTCCTTTCCCTGGCTCCCTCCATCCTTTCCTTCTTTTTTG
TCTCAGGACACTGGAGATCTTCAGTACAGCAGTTCCCTGGTTCCCATTTATCTGCTGTTTCACTTTGTACAGTTTCAGT
AAGCCACGCTCAACCACAGTCAGAAAATATTAAATGGAAATATTCCAGAAATAAACAAGTTTTAAATNGTGTGCTGTTC
TTATAGCATGATGAAATCTTGGACTGTCCTGCTTTGTCCACTCTGAAAATGACTTATCCCTTTGTTTCATGGATCCATG
CCTGGTAGACCAGGTACATTGTNAATGAGCAGTAATATTTTGAAAGGAATCTTTTTTTTTTTTTTTTTTTTTTGAGCA
GCAGATCTCAATAGTGGGCTTAAAATATTGAGTAAACTATGCTGTAAACAGATGTACTGTTATCCAGGCTTTGCAGAGC
ACAGGCAGAGTAGATATAGTGTATTTTTTAAGGGCCCAAGGATTTTTTGAATGATAGATGAGCATTAGCTTCAGCTTCA
GGTCACCAGCTGCTAACAGGAGAGTCAGCTTGTCCTTTGAAGTTTTGAAGCCAGGCATTGGCTTCTTTATAGCTATGAA
AGTCCTAGATGACATCTTCTGCCAATAGAACGCTGTTTTATCTACAGTGAAAAGCTATTGTTTAGTGCAACCACCTTCA
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AGGCGTGCAACTCTGTTTCACCTGAACAGAGGCCATTGTAGGGTTATTAATTGGCCTGACTTCAATATTGTTGTGTCTC
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ACATGAAGTGAGCACATTACTGTTGGAAAAATGGCACCAAGAGACTTTCTCAATGCAGGGTTGCCACAAACCTTCAATT
TGTAAAATATGCAGTGATCTGGATACAATATACAATATAATCTGTGAAGTGCAATGAAACCAGATATGCCTGTGTATAT
AGTGTTCAATACTATATGGTTTCAGGGCCAGGCATGGTGGCTCATGCCTGTAATCCTAACACTTTGGGAGGCCAAGGCA
GGCAGACTGCTTGAAGCCAGGAGTTTGAGACCAGCCTGGCCAACCTGGTGAAATTCTGTCACTACTAAAAATTTAAAAA
TTAGCCAGGTGTGGTGGCGGGCGCTTCTAGTCCCAGCTACTCTGGAGGCTGAGGCACGAGAATCACTTGAACCTGGGAG
GCAGAGGTTGCAGTGAGCCCAGATCACACCACTGCACTCCAGCCTGGGTGACAGAGTGAGACCCTGTATCAACAAAACA
AAACAAAACTATATGGTTTCAGGCACCTATGGAGGTCTGACATATCCCTAGCAGATAAGGGGGAGTTACTGTTTAATGT
GGAATAGAGTGGGGATCGCAGCAGCATCATCTTGCTCCTAATTTCAAAGAGGAGGTTTTTAGCATTAGAGTATTTGTAG
ATACCCTTTTATAATTTTAAAAGAAGTTATTTTCTATTTCTATTCTATTGTCAAAAAATTTTTATTGCTCGTTTTAACC
ATAAGTTGATGTTGAATCTTAATCAACTACCTTTCCTACATTTGAGGATTTTATAAGTTCTATCTTTTAGTCTATCATT
GGGGTTATATTACATTAATTGATTACTAATATTAAGCCACTTTGCATTCTAGGAGTGGCATAAATCTAATTATGATGTA
TTATCATTTGAATATATATATATCTAGATTCTGTTGCTAATATTTAGTTTATAGTTCTTGTATCTATGTTCATGAGTAAAA
TTGGCCTGAAAATTTCCTTCTCTTACTATCTTTGTTGACTTTCTGATCAAGGTTATAAATTAAGCTGAAAATTACTCTC
TTTTTCTATATATGGTTGGAATTATTTCTTTCTTGAATCTTGGGTGAAACTTAGTTAACTTTTAAAAAATAAATAATGT
AATTACACCGAAGTCAGAAAAATGGTTTGTATAATTTCAAGTCTTTGAAATTTGTTGAGACTTGTTGCATAGCCTAGTA
TATGGTCAATTTTTGTTAATATTCTGTACACATGAAAAGAATATGAATTTTGCATTGATTACAGTTTTTTTCTCTCTCT
ATAAAATCTTGTTTAAATTTCCTACAATTTTACTGATTTATTTTGCCTGCATATATATGTGTGTGTGTGTGTGTGTGTG
TGTGTGTGTGTGTGTGTGTGTGTGTATGTTTTTTTCCCCCTTTTCTTTTTAGAGACAGGGTTTCACTCTGTTGCCTAAG
CTGGAGTGCAGTGGTGCAGTCATAGCTCACAGCAGCCTTGGCCTCCTGGGCTCAAGTGATGCTCCTGTCTCAGCCTCCC

Fig. 9.8

AAGTAGCTAGGACTAATTATGCTCAGCTAATTTTATTCAAATTTTTTAGAGATTTTGTCTTGCTGTGCTTGTTACCCAG
ACTGGTCCCAAACTCCTAGTCCTAAGTGATCTTCCCACCTTGGCTGCATTTATATTTATTATTGAGAGAATTATTATAG
ATTTCTGATTAAATTCATTTTGAATTTTCATATTTATCTGGTGGACTGACCTTTTTATTTATCATTATAAAATGTCATT
CTTTATCATTAGTAATGTGTTTGTCTGTAGTCTTTCTGTATTATATTTTAGGTGTATCTCTTATAAACAGCATGTAGTT
TATGTTTTAAGAAGCCAGCTTCACAGTCTTTATTTTTAATTGTAGCATTTAGACAGTTTATATTTAATACGATTACTCT
AATTTTGGGTATAAATCTACTCTAATTTTGGGTAAAAGCACCTTTACTGATGCTTTCTAACATTATCTTCACTTTCTTG
CCTTTGTTTGGATTTTGGAAATAATTTCATGGTTTCTCCTGCTAATTTTGAAACTTATGCACTGTTTCCAGTCTTCTTG
TTGGATTCCCTAGGAATTATGTCTTTTATACTAACATATCAAAGTTTAAAGTTAGTCAGTATCTTTTCCCTCATCCCAG
ACTATTTAGGGACCTTAATGCAGTAAGAACACCCTTCCAATTAGATATTATTATAATGTATTATGCTTTATTGCTTTTT
AAACTTCATAATATATTGTTGTTATTTTATATAGTCTTTGTTTACTAGACTTACCCATGCATTTTACCACTTTTTTTCT
TCTTAAAGTAAATTCTTTAGAATTTATCTGCAGTAAGGGATTGCTTTGTTTTTGTCTGAAAACTTTTTAAATTTTGCCC
TTATTCTTTTTAACAGCTTTATTGAGATATAAGTCACATAACCATACAATTCACCCACTTACAATGTATAATTCAGTGA
TTTGGGGTATGTTACTTTTTTTTTAAGTTGTGGTAAAATATATATGGCAGAAAATTTGTGTTTTAGCCATTCAGTGTAC
AATTTAGTGTAAAGAATGCCATCATTGTTTAAAGATAGTTTAACTGTAAGTTATGGACTAAATATTTGTCTCCCCAGAA
AACTCATGTGTTGAAATCCTAACCCCCAAAGTGATGGTATTAGGAGATGAGGCCTTTGGGAGGTGATTAGGCCAAGAGA
GTAGACCATGAATAGAATGAGTGCCCTTATAAAAGAGAACCCACAGAGCTCTCTTGCCCTCTTTCTATCGTGTGGGGAT
ACAATAAGAAGTCAGTAGTCTACAACATGGAAGAGAGCCCTCACCAGAAATGGACCATGCTCACACCTTGATCTTGGAC
TTCCAGCCTCCAGGATTATGAGAAATAAATTTCTATTTATAAGCCACCCAGTGTATGGTACTTGTTATAGCAGCCTGAA
CTGACTAATACACTGTGTATAGAATTCTAGGTTGATAGCTATTTTATTTCCATATACTGCAGTTATGCCTTTGTTAGCT
GGCTTCCATTACTGCTGTTTAAAAGTCAGCTGCCACTCTAGATATCACTTCTTTATCAATAATGTGCCCCTTTCTTGGC
AGGCTGCTTTTCTCTCTGTCTTTCGTGGTCTTTCATTGATGTTGCTATATCTTGGTGTGTACTTTTTAAATAATTATCC
TGCTTGGGATTTCTTGAGCTTCTTGAATCAGAAGTTTGAGGTCTTTTGTCAGTTTAAATATTGCCTTTGTCACAATCTC
TCCTCTGCTTTTGAATCTTTAATTAAATATATGTTAGCTCTCACTCTGTCTCTTAATCTCAATGTATGTCTGTATTTTN
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AATATNCCTAAGATTACTCAGCTTGCAAGTAAAATAGATGGCAGTCAAAACAAGCACTGTCTAACTGCAAACCCCAGGC
TCCTGACTAATGTGTTTCCAGTGAGCAATGTTTTATGGTTTTTAGCACATTTACTTTGGATACTTATGTATAAGCTCAT
TTGTCATTTTTCAACCTATACTTTAAAAAATTTAAGATCTCAAATTTCTTTTTGATTTGCAGCATTTTCATTGTCTTAA
CCAGCTTTGCCAAATTCATTTCCAATTTCTTTTGGTCTCTTTCTACAAATATATGCTAAAGATTTTTCATCGAATTTTC
CACAAATTCCCACAAAAGATACTGCAACAGTGATGAAAACAAAGTCTTTCTTTGATGCTCTATAGACATAAGCATGTAT
TTGTTTTATTTTTAGGTATGATTTTTATAGTATTTTTCATTTTTATGTATAATTGCTTTTATTTTTAGGTATGATAAGT
CAAAAATGTCATAGGGAGTATCATTGCCCTAAGAGACTCTGGTAAGAAATTTATCAAATGAATGTTCCATACAGAAAAT
TTTGAAAGAGTACTACAGCAAATTTTCAAGGTTGAAGACACTCTGTATGAGCAGGGTGATGGAATTCAGCCATTTCTCA
TTTTTATTTCTCACACGTCTTTGTGTTCCTGCATCTGCCTTCAGGGAAGTCGTGTCTGGGAGTCTAGCAAATTTAATAG
ACATATGGGTCACGACTTAGCACTTATGTTATCCAAGAGTTTGGTTTTGATTCCCACATATAGAAGAGTTTCTGCACAT
TGTTATAGGAAATATAACTTTTAAAAAGCTGATGTTTGTGAGCTGCTTGTGTACAGGAAGAAGAAACTAAAAATGTCTT
ATGTTTGGAAAGTCACACAAATCTTAAATCATGATTAAAAGAGGAATCAGTTAAAATGGTCCCTAGTTATATGGGTGTG
GCTGTGGTAAATCATTACTTTTACCCTCAAGAACAAAACCCTATATATGTCAAAGACCTAGGGAAAAGTAAGAGTTTTA
TTACCTATCAAAAATCAGTATTTAGGAGAGATTCAACTGTATTTATATTCATCATCATAGTATTTTGAAGTACTCACTT
CAGCATGAAACATAGGAAATTCCAATTTTACAGCATTTGCGATCGTGCGTTTTCTTGCTTAAGACAATATAACCTGCAG
AGTGTAATACCTTGACATCACTGGGTCTTCCAAACAAGTTGCCGTAAAACATAAACTATGATTATTGAGTCTTAAAGAA
ATTATTTGCTCATGGGTACTCAAGTGATTTGAAAGTTGGGATCTAAGACCACGTTAATGAACAGAATTTGCTACTTTGT
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CCCTCTGATGAATTTTTTCAGTGTCTAGTTAACTTAACGTTTAAATTTTCAATTTGAAGAAATAAACTGGGAACAGTAA
TGGGACAACAGGGTGCTAACCCAATAAAAAAAGTCACTTTCAGTTTGTTAGTGCATATTTATGTTGCAATGTAAGTTTC
ATAATTAAGTAGTGAATCTAAGTTAAAATTCTGTTTACAGTTTTTGCAAATTTCACCTTGGAGAATTGTTGAGTGAATT
GTTTGCTTCATTTGAGGATGTAGAATAAATTATATTTTCCATAAAATGTCACCAACAGTGCTTATTTCCAAACAAAAAA
TAATTATGTATGTGGCTAGGTCTACTCACTTTGTAATACCTCTTTTGGGGCTCTTCTGTCAGAACTGAGGACACTTACA
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CAGCGTATCTTTCAAAATAATAACAAGGTAGTCTTCTTGAGTAGTTTATAATGGATTTCTTTCTATGTTTAATAAAGCA
AATGAAACTTAATTTTTAAAAAAACTAGAGGACTAAAAATTATTTTCATGAGAACTAAGTAAAATATAATTGATATTTG
TATTAGTCCATTCTCATGGTACTATGAAGAAATACCTGAGACTGGGAGATTCATAAAGAGAAGAGGTTTAACTGACTCA
CAGTTCTGCATGGCTGGGGAGGCCTTAGGAAACTTACAATCATGGTGGAAGGTGAAGCAAACACATCCTTTTTCACAAG
GCGACAGGAGAAGAAGCGCCGAGCAAAGGGGGAAAAGCCCCTTATATAACCATCAGATCTTGTGAGAACCCACTATCAT
GAGAACAGCATGGGGATAACTGCCCCCATGATTTGATTACCTCCCACTGGGCTCCTCTCACGACACGTGGGAATTATGG
GAACTACAACTCAAGATGAGATTTGGGTGGGGACACAGCCAACCACATCAATATTTAAAATTGAAGTACTTCAGTTTTG
ATTAGTGTAGACTAATACAACATGCGAATGTAGAGGCCTTTTGCTCACTCTTCCCACTAAGAACTCAAGACCTTTGAAG
GGTCCTGACAACAGACATTTCAGTGATAATTTACCAAGATAGCAGAACTGTTTGTTGCTAAAAATAGTTATGCAGGATA
AAATGCAATCTATAATTTTATGAGAACCTGTGATTCTAGTTTACCTCCAATTACTAATATCCATATCTATGTTTGTATA
TTTTTTAATCAGGTGTGTTTTGGACTCAGAAGTTATTAAAAATTCAGTCAAATGATGGGAGTGATGTTTTGAAGATTAG
AATCATGTAGCTGATTCACATGCGTTATTAGACCATGATAAGAAGCACAGAGGAAATATAACAAATGAAATCAGCCTTC

Fig. 9.9

TTGCCTACTGATTCTGCATAATTTTAAAAATTAAATTTGGGTTTTTGTCCATATGCAAATTTGTCCTAAAAATTTCCAT
CTTTTGAAAGCGTTTTGATACTTAGAAAAAAAAAATTTAAGACTTTTCTAAATAGAATATACAAGATGGTACAATCTGAT
TGGATAATAATGCATCAGTGTTCTAAGTTAATAATTGTCTAAGGCAATAATTAACATTTAAAACATGCAGTGACATCAT
TTCTGAATTTTTTTCTACTTTCTACTTATCAAAATGCCAAATATAATTATACACAATTACTGCTTAAAGATGATGAAGG
TTTTGATTTCAGAAAGTTCATCACTCTTACCTTTTCACAGAGAATTTAATTTGATGATCTATTAAGGCACAACAGGTGT
CTGATTTAGCATATTTGACTATTTTCACAAGTCACAATCCATCTAACAAGGACAGATGTTCCCAGTAGAGGTCAGTCTT
GTGTTGATAGTTATTGTATCATAAAGGAAAAACTAGGGATTTTATGTTTAAGTCCAGTATATTTGATATAGGTAGTAAG
CCATTAATTGTGGAAGAAAGAAACTTAAAGATTGGTCATCTTTATTGTAACAAAAATTACTGTGGGTAATATTTTGGGT
CCTTTATTACCATATGTTTTCCTCAAAACCCCAGAAAGCTTAACTGCTTGCTAAATACTCCCTAAAAGGAACTTACCAA
TGGTAGAAATGAACAATTATCTAAACGTAGCAACAGATAATTTGGGATAAATGTCAGATTATTGGATTTGAAACTGAAA
ATATTTCTTGCAAATTTCAGTTTGAGAAGAGAAACACAGAGGTAGGATAATTTCACGCATCAGCCCCTCACCTTAGCTG
TCTTCTCTGCAATATGGGGACAACTGTGCTTGTTCTCTTTCCCTCAGATAAATCTTGTTTTATTCCTCAGACTAATGTT
TTGGTCTATAAACCGAGAATTTTATAATAAATGCGGAGATGGCAATCGGAGATAAAGCATATGTTTACAAGTAATGCCT
TTGGAGTTGTTGATGCCAAAATACAATAAGCAGTCAAACCAGCATAGCCCAGGAAACATCTTTGAGGTTACTGAGATGA
TAAATGACTTTACTGCAGGTAGATGGTGTGATGGAAAGAGCAGTGTGTTAGCAGCAGTGGTTCTGCCACCAGATAGCTT
GAGGAGGCTTTAATTTCCCACACCTTAAATAAACATAATTAAGTAAACTGTGTTTGCTATGCAAATACAGTCTAAAAGC
AAGACTCCTAGTTCCTTCTTTCGAACTAAATTATTACCCAACGGTCCTTCCTATTAGAATTTGTAGCACCAATATTAGT
TAGAAATCAGAATATTTGGATTTTAACTTGTGGCACTGCCAGTTGGGCAAGTGACCTTGAGCAAGTCACAACCTCTCTG
AGATTTGTCTTTTTCTCAGTAAAGTGAAGGGATTGGATATGGAAGGAACAAACTCCAGTGTTTTCCAGGACAGGAAGAT
ATTAGAAGTTGCTGAGAATGGAGGGGTCAGTGGAGAAATGGAGTGTGCAGACCTTACAATAAGGTATCTGATAGAAACA
AAGTGTTGAATGCTCTATGTTGGCCAAACTTATGCTTTATGTAGAGGTGGGCAGACAGATGCAGGTAAGAAAACTGGGA
GAGAGGTGCCCAGTTACAAATGCAAAACTTCAACTCTGGTCTTCTGTCCGATGATCTGGAGTTCTTCCCACTTCGCCAC
ACTAAGTCTTGTCGCTGACAGGAGTGTGTGGGCTTGATCTAAGCAAATCTCTGAAAGAGAGGGCTTATATTTGGTTCCC
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GTTTCCTGAGCATGAGCTTTGTAGGCGACACATTTCAGGAGCTGAAACAGCCCAGACCCCACCTCTCTTTTCAGGCTCC
CCACTATGATGTTGACATTTGCCCTCCACAGAGCTTATACCAGGCTGCATTATGTTTCTTCATGAAGACTAGTTAGCTA
AGCAAGTACTTAGAGCCCTTTCATTCATTCAGTTTATTGTAGAGCCTTAATACTGCAGATGCTAGGCTGGGCAATGATG
AAGGGAGAAAGACGGCTTTAACTCTGAAGGAGCCTCAGCCCAATGAGGAAAGCAATATGTCTACGTGTAACTCTAGATG
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GTTACTGAGGAGCTAATATTCAAGCTGAACCCTGAAGAATGTGTCCACTAGTGAGGAAGGCAGGGCAGAGGCATTTTCT
CAGAGGAAATAGCATGAAATAGGATCTGGTGACAACTAGAAATGACTTACCATTCCATGTGGTCCAGGTAATGCTAATA
CTTCAATATAAAGTCTGACATGGCTCTCTGTAAAGGACTGAGTAATAAGGGGATTTCATGAACTGTGGCCAGGCAGGCA
GCGGACTTATTTTTAAGTAAGGAGTTTTTTGGCACCTGTCAAATAACATCTCCGAGATGGCTTCCTTTACATATTCCAG
GTCAGTTGATCCAGATCTCAATGCTCTTTGCAATTTTTGGATTCTTAGTAGGTTGCTGCTACACCATGGTTTCTCTTTC
CACATTTTCACAGGGCATTCCTGCATTAGTCTGTACTGATGAGTTTACAATGGTTGCAATAATTGTTGGTGTTGATGAA
CCTTCCTTGCACTTTATGTAAAAGAGTGATCCTTTTATTGCCAGTTTCTATTTTTCCATCAACAGCCTGATATTCCATG
CCTCTGGGTCCATACTGTTCCATTTCATAACATTTAATGAATGTTAGAAGTGGCTCTGCAAATGCATTGCCTTAATCTT
GTTGCCTGCAGTGAGATGCTTTTAATATTTTCTCCACATGTGAACTCAGTGTTTTCCTTTAGGTTTTCTTTAATTTCCA
TGTGGTTAATGTCACTACTGCAGGGAGCCTGGATATTTATAGATTTTTCCCTTTCACTCTATCTTCAATAATTTGCTTT
TGCATTCAGTGAACACATCCATCACAATAAATGGTCCTTTTCTCATTTGTATTGACTTGCATTTATATAAACCAGACTT
CCTTTTTATAGTATTATCAATGTTCATGGCAATTTTCAGTAGCTTGGGGAGCTGGGTATGAGAGTTGGCACAGAGCTGC
AAGTTTTCAAATGACTCATGTCATGATGCCTGGTTTCAAGCTTTATCATTAAGTCAAGACCAAAGTTATATGGGTTTTT
TTCCTTAATTGCCTCAATATAAAATGAGAGTATTAAATAAGCATCTCTAAATTATTCCCAATTTCATTAAAATGTTCTT
GATTTGATAGCCCTTTTGTGCACTGAAAGATGTAAAATATTCCAATTACATTGTTGACTATTCATAGTCAGTTCAATGT
TATAAACTTGTATAGCTCCTAGTAGAAATAAACAGGGAACTGAGTTATATACAGTTCATATTGATCATTCTTAGATGCT
ATTGCTTTCTGATAGCTCAATTTATTTTAACAGAGTCTACAATGATGTCATTTTAAAATTATTATTTTAATATTTCATT
TATATTCTTTTAATATAAGTTAATTTTTTCCTATCACTGTGCATGTCATTGGTTTGCAGATTGTTGGGAAGAATATCAC
TGGCAGGACTTGTATTGCTGTTCTTTAGGCAAAAGCAAACTGGTCAACCTAATCAAACTTTTTCTAGCTTGTGGAAGGC
CTCTCAGAAAATATCTTTCAGAAGTAGCTCTGTGTGCTCAGACCCCTGGAACCAGTCATTCTGCTGCAACAGAGGCCTG
TGCTTTCCTATTGCCACCCATTTTCACTGCTCAGTGGCCTCTTCAGATATTAGTGCTATTTCCATAATTCTAGTTGCAT
ATGCTTTTTTGTTTCTTACCTATGCCACTTAAATATTGTGACATTTTGGGAGCACTTAAACATTTACTTCAAAACTTCA
CATCTTTGTGGTATTTTTCTATAGTAACTTGTGGTTGTTAGAAATGCTGAAAATAAATGGTGCTGGGATAACTGGGTAG
TTAAATGTGGAACATTGAAACTGGACCCCTTTCTTTCACCATATAGCAAAATCAACTCAAGATGGATTAAGGATTTAAA
TATAAAACCTAAAACTATAAGAATCCTAGAAGAAACCCAGGAAATACCCTTCTGGACATCAGACCTGGCAAAGGTTTTA
TGATGAAGATTCTAAAAGCAATTGCACCAAAACCACAAATTGACAAGAGGGACCTAATTAAACAAAAGAGCTTCTGCAC
AGCAAAAGAAACTCTAAACAGAATAAACAGACAACCAACAGAATAGGAGAAAATATTTGCAAACTATGCATCTGACAAA
GGTCAAATATCCAGAATCTATAAGTAACTTAAACAAATCAACAAGCAAAAAAACAACCCATTAAAAGTAGGCAAAGGAC
ATGAACACTCATCAAAAGAAGAGAGATGAATGGATGAATGGCCAATAAGCATATAAAAATGCTCCACATCACTAATCAT
TAGAGAAGTTTAAATTAAAACCACAGTGAGATACCGCTCATACCAGTCAGAATGACTATTCTTAAATAAAAGTAAAAAA
ATAACATGCTGGTCAGGTTGCAGAGAAAAGGGAATGCTTATACAACTGCTGGTGGGAGGTAAATTAGTTCAGCCACAGT
GGAAAGCAGTTTGGCTATTTCTCAAAGAACTTAAAACAGAACTACCATTCAATCCAGCAATCCCATTACTGGGTATATG

Fig. 9.10

CCCAAAGGAATAGAAATTGTTCTACCATATAGACACATACATGCTTATGTTCATTGCAGCACTATTCGCAGTAGCAAAG
ACATGGACTCAACTTAGATGACCGTCAGTGATGGACTAGATAAAGGAAATGTGGTTCATATATACCACAGAATACTATG
CAGCCATAAAAAAGAATGAGAGATCATGTCCTCTGCTGGAAGATAGATGGAGCTGGAGGCCATTAACCTAAGCAAATTA
ATATGGGAGCAGAAAACCAAATACCACATGTTCTCATAAGTGGAAGCTAAACATTGAGTACACATGGACACAAAAAAGG
GAACAAGAGACACTGAGACCTAGTTGAGGGTGGAGGGTGGGAGGAGGGTGAGGATTGAAAACTACCTATGGAGTACTAT
GCTCATTTTCTGGGTGATGAAGTAATCTGTACCCCAAACTCCTATGACATGCAGTTTACCCATAAAACAAACCTGCACA
TGTACCCCCCGAACCTAAAATAAAAGTTGGAATGGCAAAAAAAGAAATGCTAAAAATATATTATTTCATTATCCCAATA
AGCTCTTACAGTAATTTTTTTATCTGTGTGGCTTTTTTGGGGGGTATATCTCCAGTATAATTTAAAATAATCAGTTAAT
TTTTGTTTTCTGGATTCAGTCATCTTTACTACCATATTAAATTATTTCGAAGACATATTTTTTTTCTCCACATTTTAGC
ATCTCTGAAACTAGAATGCATCTTTCAATTAAGGATGTATCACAGTTTAATTGGAAGCATTTTTTTTGTAGTGGTAGAA
AAATTAGTTGTGTCCTAGATTTAATAAAATGTGGCATTTTATTTTTATTTTCCAAGGACAGATAATGGAAGGTGGTTCA
TTTGTTTATGCTTTGAGTAAGCATTCCTGAGTATTCTCTGAGCTTCTTTTCTGTCCCAATCTTTTCTATGCAAGTCTAT
CTTCTATCTTGTTCATTTATTTATTCATTCTCTGCAATTAGTAGAAGTATTTAACAGAAGGTAAAAACATTTGAAATTT
TTTTACTCTNCTCTCCTAAATTTCTATGCATATGACTTTATACCTGGTCAGGCCAAAGAATTTTTGTGTAGCAGGGGAT
GGGAGAAGGAGAAATTATGGGAATAGTGGTGGGATTAGGACTTTTATAACAAGAATGCAAAGAAGAACCAGTGTTCAGC
TTTTAATTACTGTAGGATGTTTCTAATAATGCTGGCAATGAGGAAAGCTTGACTTTGTCAGGAGAAGGAAGGATTTTCT
AAATTTCTTTAAAGCTCAGATATGTAGTAAAAGAAAAAATTTCTAGAATTTCTTCCAGAGTCTCAAGGTACTGGTTTATC
TAGAAAGAATGATTTGGATTAGAGCAAGTAGATGCCCTCCCCTTTTGGTCTCATGGAATAAGAGTCCCTGTTTTTTCCT
TAAGGTCCTTGCTTTTCCCCTTCTTAGGACTGTGTCTCAAATGGGGTGAATGTAGAAACATCAGGAAAGGCATGGAGGA
GTCTGAGAACATTTGAGCTAGTGGTCTGCTCCTCTGTCAAAGCATGAGGGAGCACACAGACATTAGTTGGCTCCACTTC
AGGCTTCAGGTCTGGGACACAATCAATAGTGAGAGAGCAATGACATGGAGGTAACCTTGGAGACAGCTAGAAGGATTGA
GACTGAGGATGTGCTCCTGGCTCTCCAGGGCCTGCGCTTGGTGTGCAGGGTATTGTGTGGGTTTCCATGCCTGGAGCTT
TTCTACTGCCTCAGGGACCTCTGAGGCCAACAGATCAGAAAAGGCTGTATCAGAGTGAAGAGACTGTAATAGAAGGAGC
CTTTAAGACTAGAGGCCAGGATCAGTTTCTAGTAGTGTTTGTCAGCATTTTCCACCCCAAACCAAGTGTGAACAGTTTT
ACTCATTGTAACTGGTCCAGGGAGCTGAGCAACTTACCTACCTGCAGTAGAATACAGTGGAGATTCAGAGAACATCTCT
TGAATCTGAGGTCTGCCTCTCTCTGTCTCTGTCTCTCTCTCTCTCTGTCTCTCCCTTACTCTGTCTCTGTCTCCTTCCA
AAAAGAATAAAGTAAATGTCTTCACATACCTAGATGCCATCTTTGGGAGGAGAAGAGGGTAGGGACAGAACTCTGAAAT
GCAAGTGTATCTGTTTGGGTTCAATCAGAAGATAGAGAACATACAGTAATCTGAACAGGGGAATTTTAATATAAAGATA
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GCAAGCAGAAGTAATCCTCTGGAGTGCAGGTGGGGCACAGGTGAGCTGCAGCTGGTGGCTGGGTGGGTACGCATGTAGA
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AGGGTTTGGGGGTACCAGTGTAGGCAAGAGGCCTAGAGTGTGCAGTATGCAGATTGTGAGGGTGTGGGAAGGTGATCAG
GAGTCCTGGCCTACGCTGTAAGGTGGCCAAGGGACTGCACCTTCTGGACTAATGGCTGAGGCAGAACACCACTGGAGTC
CTCACACCCACACCGCTGGCCCACTGTGCAGCAGCAAGAAACAGCAGAAGAGTCATTTCCTCCGGCATTGCCCCTCCAG
CACCTTTAACTGTGAGAGTTTAGTATCATACACACTATAAAGGAGAAATGCTTAAAGGAATTCTGTTCATTATCACAGA
GCATGTATTGAATGGTGAATTTGGAACTGAAAGGTGGTAAGTTGATAACTGGCACAATAAATCTTTATTCAGAAGAGAC
TAAATCATCCAAAAGAAATTCTAACAGCTGGCACTCTTTTAATGGGCTTCCAATGAACAGAGTTGTTGGATTAACCAAT
GCATTCTGTATCCTCCATAAAATTGTATATAGATTCATGTCCACTGTGTGGTGTTGACTCATAGCCAGTTGGCTGTGCT
CTAGTATACCATTGTACCTATGTTTCCATACCATTTGGGAGCTGTGTTTATTCTCCATATGTTTATACTAGTTGTATTA
AGTATCTATTTATTCCAAGTCTATTTATAGTAGTTGTATTAGTTTTCTATTTTCTAACATATTTTTATTTCTATTTTAT
AACAGATAATCTGAAAACTTAGTGACTTAAAACAACAATAACAACAGTGGACATTTAGTCTGCCACAGTTTCTGCAAAT
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AGGGCTGTTGCCAGGAGCGTCAGTTTGTTGCCATGGAGATATCTCCACTAACTGAGTACCCTCATGACATGACAGTTGG
CTTACCCCAAGTTGGGTGATCTTAAAGATAGTGAGGCAGAAGCCACAATGCCTTTTATAACAGTCTCAAGAAGTCACGA
AGTGTCATTTCTGCAATATCCTGTTGGTTACACAGCTCACCCTTTTTAATGTAGAAGAGGACCACACAAAAGTGTTAAT
ACCAGGAGAGGCCACTGGAAGCTGTCTTGGCTACTGGCTACCACACTAATATCTGTTATTGTAATCACAAAATTTAATT
AAATACCATAAAAACAATTGAAATATGAATATAAAAGTATTTTTTTATAAAAACTAAGTGCTTTCAAAAAACTTCTTAA
AGTATAAAAAAATCTGTTGTATAAAATGAGGCTAAGACAACTAAGAAATTGAGGATATTTTGTAAAAATCTGGATGGAT
TCTGCTCCCAAGTAACTTTGCAAGTGACATGAACTTTTTTTATTCCACTTTAAAGAAATTAATTGGTGATGCAAAAAGT
TTTGGAGTAATAAATGGCTTGAATGTTAAGGGAAAAAAATACCCAACCCAGCATGATACCCATATACTAAGCACCATTA
GGGAGAAATTATCTTGCTGTTCTAAAGAGTAATGAAGTTAATGTCAATTCTTGAGAGATAACATTTGATTGAAGAACAA
GTCTACAATACCACATCATAAGCTATTATCTACAAAAATGGTAATAAGAGCATAGGTATGAGGTTTTAATAAATAATAT
TTTACAACAATCAGTAATATTTGCAGCAATGCAACTAGAGTAAAAAATTGCTGTTATTGGCAAATTGACAAAAGAGGTT
TTAGAAATAAAAAATATATTATTAATCTAACTACAGTACCAAAAATAAATTTGGAAGAATACTGAAGTTTTCATCTATC
ATGACAGTAGAGATTAAAAAAAAATCAAAAAACAACCACCCAAGCCATGGTGCCTATATCAGTTTTCAATTGTAGCTTA
ACCAAAATCACCCTAAAATTTAGTAGTTTAAATAAATGGTTTATACAACAATCATATTATTATCTCTCGGGCTCTCTGT
GAGTCAGGAATTCAGACAGAGTACAGTAGGGATGATGGGTTATTTTCCCACTGTGTATAGAGCCTCATCTAGGAAGACT
TGTAGGCTGGGAATGACTCAACAGTTGGGGGTCTGGAATCATCTGGTGGAATCTACATTCACTTGTATTGCAGTTGATT

Fig. 9.11

CTGCTTATCATTTGGAATTCCAGCTGGTCTTGCTAAAGCACATACACATGGCTCTTCCATGTGACCTCTGTGTTTGTTT
GGGCTTCCTTACAGCAGGGTGGGTGCCTTACAAGAATAAACATCACTGAGAAAACCAGAAGAAAGCTGTATTGCCATTT
AGGACCTTGCCTTTGGAAGTCTCACAGCTTTACTCCCTTTGTAGGCTCCATCTTGCTCAGATTCAGGTGGAGGGACCAT
ATACACCACATCTTGATAGGAGGGTGGGTATCAAAGTCACACTGTAAGATGGTCATGCAGGATGGGAAATACTATTGTG
GCAGTCTTGGAAACTGCAATCTGTGCACATACACACACACACACACTGGGAACAATCTTACTTCCTAACTGTATGAACC
TTAAGGATGAAGATATGTAAAGGCCATATTTTTACCACTGAATATCATGAGAAAGTGTTTTAGTTCCATTTTGAAAAGA
TGGAATATGAGAAGATGAGTTTATAGAATTGATAAAATTCCTCGTTGATATGGTTTGGCTCTGTGTGCCCATCCAAATC
TCATGTTGAATTGTGATCCTGAGTGTTGGAGGAGGGGCTTGGTGGGAGGTGATTAGATCATGGAGGCAGATTTCCCCCT
TGCTGTTCTCATGATAGTGAGTTCTCATGAGACCTGGTTGTTTAAAAGTGTGGCACTTCCCCATTCTCTCACTCTCTGT
CTCCTGCTCCACCATGGTAAGTCATGCTTGCTTCCCCTTCGCCTTCTATCATGACTGTAAGTTTCCTGAGGCCTCCCAG
CCATGCTTCCTGTGCAGCCTGAAGAACTATGAGTCAATGAAACCTCTTTTCTTCATAAATTACCAAGTTTCAGGTGGTT
CTTTTTAGTTTAGTTGAGAACTAATACAGAAAGTTGGTACCAGAGAAGTGGGGCATTGCTATAAAGATACCTGAAAATG
TGGAAGTGACTTTGGAACTGGGTAATGGGCAGAGGTTAGAAGAGTTTGGAAGGCTCAGAAGAAGACAGGAAGATGGGAA
AGTTTGGAACTTCCTGGGGACTTGGTGAATGGTTATGACCAAAATGCTGATAGTGATATGGACAGTGAAGTCCAGGCTG
AGGTGGTCTCAGATGGAGATGAACTTGTTGGGAACTGGAATAAAGGTCACTCTTGCAATGCTTCAGCAAAGAGACTGGC
AGCATTGTGCCCCTGCTCTAAAGATCAGTGGAGCGGCTGGAGCCAAGATGGCAGAATAGGAACAGCTCCGGTCTACAGC
TCCCAGTGTGAGCGATGCAGAAGACAGGTGATTTCTGCATTTCCATCTGAGGTACTGGGTTCATCTCACTAGGGAGTGC
CAGACAGTGGGCGCAGGTCAGTGGGTGCAGCACACCGTGTGCGAGCTGAAGCAGGGTGAGGCATTGCCTTACTTGGGAA
GTGGAAGGGGTCAGGGAGTTCCCTTTCCTAGTCAAAGAAAGGGGTGACAGATGGCACCTGGAAAAGCGGGTCACTTCCA
CCCCAATACAGTGCTTTTCAGATGGGCTTAAAAAATGGCACACCAGGAGATTATATCCCGCACCTGGCTCGGAGGGTCC
TACGCCCATGGAGTCTCACTGAATGCTAGCACAGCAGTCTGAGATCAAACGGCAAGGTGGCAGTGAGGCTGGGGGAGGG
GAGCCCGCCATTGCCCAGGCTTGCTTAGGTAAACAAAGCAGCCAGGAAGCTCGAACTGGGTGGAGCCCACCACAGCTCA
AGGAGGCCTGCCTGCCTCTGTAGGCTCCACCTCTGGGGGCAGGGCACAGACAAACAAAAAGACAGCAGTAACTCTGCAG
ACTTAAATGTCCCTGTCTGACAGCTTTGAAGAGAGCAGTGGTTCTCCCAGCACGCAGCTGGAGATCTGAGAACGGGCAG
ACTGCCTCCTCAAGTGGGTCCCTGACCCCTGACCCCCGAGCAGCCTAACTGGGAGGTACTCCCCAGCAGGGGCAGACTG
ACACTTCACACGGCCGGGTACTCCTCTGAGACAAAACTTCCAGAGGAACGATCAGACAGCAGCATTCGCAGTTCACAAA
AATCCGCTGTTCTGCAGCCACCACTGCTGGTACCCAGGNAAACAGGGTCTGGAGTGGACCTCTAGCAGACTCCAACAGA
CCTGCAACTGAGGGTCCTGTCTGTTAGAAGGAAAACTAACAAACAGAAAGGACATCCACACCAAAAACCCATCTGTACA
TCACCATCATCAAAGACCAAAAGTAGATAAAACCACAAAGATGGGGAAAAAACAGAGCAGAAAAACAGGAAACTCTAAA
AAGCAGAGCGCCTCTCCTCCTCCAAAGGAACACAGCTCCTCACCAGCAACGGAACAAAGCTGTATGGAGAATGACTTTG
ACGAGTTGAGAGAAGAAGGCTTCAGACGATCAAACTACTCTGAGCTACAGGAGGAAATTCAAACCAAAGGCAAAGAAGT
TGAAAACTTTGAAAAAAATTTAGACGAATGTATAACTAGAATAACCAATACAGAGAAGTGCTTAAAGGAGCTGATGGAG
CTGAAAGCCAAGGCTCGAGAACTACGTGAAGAATGCAGAAGCCTCAGGAGCCTATGCTATCAACTGGAAGAAAGGGTAT
CAGTGATGGAAGATGAAATAATGAAATGAAGTGAGAAGGGAAGTTTGGAGAAAAAAGAATAAAAAGAAATGAACAAAGC
CTCCAAGAAATATGGGACTATGTGAAAAGACCAAATCTACGTCTGATTGGTGTACCTGAAAGTGACAGGGAGAATGGAA
CCAAGTTGGAAAACATTCTGCAGGATATTATCCAGGAGAACTTCCCCAATCTAGCAAGGCAGGCCAACACTCAAATTTG
GGAAATGCAGAGAACGCCACAAAGATACTCCTCGAGAAGAGCAACTCCAAGACATAATTGTCAGATTCACCAAAGTTGA
AATGAAGGAGAAAATGTTAACGGCAGCCAGAGAGAAAGGTTGGGTTACCCACAAAGGGAAGCCCATCAGACTAACAGCA
GATCTCTCGGCAGAAACTCTACAAGCCAGAAGAGAGTGGGGACAAATATTCAACATTCTTAAAGAAAAGAATTTTCAAC
CCAGAATTTCATATCCAGCCAAACTAAGCTTCATAAGTGAAGGAGAAATAAAATACTTTACAGACAAGCAAATGCTGAG
AGATTTCATCACCACCAGGCCTGCCCTAAAAGAGCTCCTGAAGGAAGCACTAAACATGGAGAGAAACAACCGGTACCAG
CCACTGCAAAATCATGCCAAATTGTAAAGACCATCAAGGCTAGGAAGAAACTGCATCAACTAACAAGCAAAATAACCAG
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GACACACGTAGGCTCAAAATAAAGGGATGGAGGAAGATCTACCAAGCAAATGGAAAGCAAAAAAAAGCAAGAGTTGCAA
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CTGAGTGACCTACAAAGAGACTTAGACTCCCACACAATAATAATGGGAGACTTTAACACCCCACTGTCAACATTAGACA
GATCCATGAGACAGAAAATTAACAAGGATGTCCAGGAATTGAACTCAGCTCTGCACCAAGCGGACCCAATAGACATCTA
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TCAAACTAGAACTCAGGATTAAGAAACTCACTCAAAACTGCTCAACTACATGGAAACTGAGCAACCTGCTCCTGAATGA
CTACTGGGTACATAACGAAATGAAAGCAGAAATAAAGATGTTATTTGATACCAATGAGAACAAAGACACAACATACCAG
AATCTCTGTGACACATTCAAAGCAGTGTGTAGAGGGAAATTTATAGCACTAAATGCCCACAAGAGAAAGCAGGAAAGAT
CCAAAATTTACACCCTAACATCACAATTAAAAGAACTAGAAAAGCAAGAGCAAACACATTCAAAAGCTAGCAGAAGGCA
AGAAATAACTAAGATCAGAGCAGACCTGAAGGAAATAGAGACACAAAAAACCCTTCAAAAAATTAATGAATCCAGGAGC
TGGTTTTTTGAAGAGATCAACAAAATTGATAGACCGCTAGCAAGACTAATAAAGAAGAAAAGAGAGAAGTATCAAATAG
ATGCAATAAAAAATGATAAAGGGGATATCACCACCAATCCCACATAAATACAAATTACCATCAGAGGATACTACAAACA
CCTCTACACAAATAAACTAGAAAATCTAGAAGAAATGGATAAATTCCTGGACACATACACCCTCCCAAGACTAAACCAG
GAAGAAGTTGACTCTCTGAATAGACCAATAACAGGATCTGAAATTGTGGCGATAATCAATAGCTTACCAACCAAAAAAA
GTCCAGGACCAGATGAATTCACAGCCGAATTCTACCAGAGGTACAAGGAGGAACTGGTACCATTCCTTCTGAAACTATT

Fig. 9.12

CCAATCAATAGAAAAAGAGGGAATCCTCCCTAACTCATTTGATGAGGCCAGCATCATCCTGATACCAAAGCCTGGCAGA
GACACAACCAAAAAGAGAATTTTAGACCAATATCCTTGATGAACATTGATGCAAAAATCCTCAATAAAGTACTGGCAAA
CCAAATCCAGCAGCACATCAAAAAGCTTATCCACCATGATCAAGTGGGCTTCATCCCTGGGATGCAAGGCTGGTTCAAT
ATATGCAAATCAATAAATGTAATCCAGCATATAAACAGAACCAAAGACAAAAACCACATGATTATCTCAATAGATGCAG
AAAAGGCCTTTGATAGAATTCAACAACCCTTCATGCTAAAAACTCTCAATAAATTAGGTATTGATGGGACGTATCTCAA
AATAATAAGAGCTATCTATGACAAACCCACAGCCAATATCATACTGAATGGGCAAAAACTGGAAGCATTCCCTTTGAAA
ACTGGCACAAGACAGGGATGCCCTCTCTCACCACTCCTAGTCAACATAGTGTTGGAAGTTCTGGCCAGGGCAATTAGGC
AGGAGAAGGAAATAAAGGGTATTCAATTAGGAAAAGAGGAAGTCAAATTGTCCCTGTTTGCAGATGACATGATTGTATA
TCTAGAAAACCCCATNGTCTCAGCCCAAAATCTCCTTAAGCTCATAAGCAACTTCAGCAAAGTCTCAGGATACAAAATC
AATGTACAAAAGTCACAAGCATTCTTATACACAAATAACAGACAAACAGAGAGCCAAATCATGAGTGAACTCCCATTCA
CAATTGCTTCAAAGAGAATAAAATACCTAGGAATCCAACTTACAAGGGACGTGAAGGACCTCTTCAAGGAGAACTATAA
ACCNNTGCTCAATGAAATAAAAGAGGATACAAACAAATGGAGGAACATTCCATGCTCATGGGTAGGAAGAATCAATATC
ATGAAAATGGCTATACTGCCCAAGGTAATTTATAGATTCAGTGCCATCCCCATCAAGCTACCAATGACTTTCTTCACAG
AATTGGAAAAAACTACTTTAAAGTTCATGTGGAACCAAAAAAGAGCCCGCATTGCCAAGTCAATCCTAAGCCAAAAGAA
CAAAGCTGGAGGCATCACGGTACCTGACTTCAAACTATACTACAAGGCTACAGTAACCAAAACAGCATGGTACTGGTAC
CAAAACAGAGATATAGATCAATGGAACAGAACAGAGCCCTCAGAAATAATGCCACATATCTACAAGTATCTGATCTTTG
ACAAACCTGAGAAAAACAAGCAATGGGGAAAGGATTCCCTATTTAATAAATGGTGCTGGGAAAACTGGCTAACCATATG
TAGAAAGCTGAAACTGGATCCCTTCCTTACAGCTTATACAAAAATTAATTCAAGATGGATTAAAGACTTAAATGCTAGA
CCTAAAACCATAAAAATCCTAGAAGAAAACCTAGGCATTACCATTCAGGACATAGGCATGGGCAAGGACTTCATGTCTA
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AGAAACTACCATCAGAGTCAACAGGCAACCTACAAAATGGGAGAAAATTTTTGCAACCTACTCATCTGACAAAGGGCTA
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AAAGGGCTAATATCCAGTATCTACAATGAACTCAAACAAATTTACAAGAAAAAAACAAGCGACCCCATCAAAAAGTGGG
TGAAGGACATGAACAGACACTTCTCAAAAGAAGACATTTATGCAGCCAAAAAACACATGAAAAAATGCTCACCATCACT
GGCCATCAGAGAAATGCAAATCAAAACCACAATGAGATACCATCTCACACCAGTTAGAATGGCGATCATTAAAAAGTCA
GGAAACAACAGGTGCTGGGGAGGATGTGGAGAAATAGGAAAAGTTTTATACTGTTGGTGGCACTGTAAACTAGTTCAAC
CATTGTGGAAGTCAGTGTGGCGATTCTTCAGGGATCTAGAACTAGAAATACCATTTGACCCAGCCATCCCATTACTGGG
TATATACCCAAAGGATTATAAATCATGCTGCTATAAAGACACATGCACATGTATGTTTATTGCAGCACTATTCACAATA
GCAAAGACTTGGAACCAACCCAAATGTCCAACAATGATAGACTGGATTAAGAAAATGTGGCACATATATACCATGGAAT
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ACTATCACAAGAACGAAAAACCAAACACCGCATATTCTAACTCATAGGTGGGAATTGAACAATGAGAACACATGAACAC
AGAAAGGGGAACATCACACTCTGGGGACTGTTGTGGGGTGGAGGGATGGGGGAGGGATAGCTTTAGGAGATATACCTAA
TGCTAAATGATGAGTTAATAGGTGCAGCACACCAGCATGGCACATGTATACATATGTAACTAACCTGCACATTATGCAC
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GGGAAATGTGGGGTTGGAGCCCCCACACAGAGTCCCTCCTGGGGCACTGCCTAATGGAGCTGTGAGAACGGGGCCACCA
TACTTCAGACCTCAGAATGGCAGATCCACTGACAGCTTGCTCTGTGTGCCTGGAAAAGCTGTAGGCACTCAACACCAGC
CTGTGAAAGCAGCCATGGGGGCTGTATTATGCAGAGCCACAGGGGTGGAGCTGCCCAAGGACTTGAGCCCACTGCTTGC
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TCTCTTCAAAGAGTCTCATCTTTGTCTCTCATAAAAGATGAGACTTTGGACCTACACTTTTGAGTTAATGCTAGAATGA
GTTAAGACTGTTGGGAAGGCATAATTGTGTTTTGAAATATAAGAAGGATATGTGATTTGGGAGGGGCCAGGACAGAATT
ATATGGTTTGGCTTTGTGTCCCCACCCAAATCTCATGTTTAATTGTGATCTTAAGTGTTGGAGGTGGGGCCTTGTGGGA
GGTAATTAGATCATGGGGGCTGATTTCCCCCTTGCCATTCTCATGAGACCTGGTTGTTTAAAAGTATGTAGCACTTCCC
CCTTTGCTCACTCTCCTGCTCCACTATGGTAAGACATGCTTGCTTCCCCTTTACCTCTGCCATGATTATAAGTTTCCTG
AGGCCTCCCAGCCATGCTTCCTGTACAGCCTGCAGGACTGTGAGTCAATTAAAACTTTCTTCTTATACCATTTGATCCA
GCAATCTCATTACTGGGTATATACCCAAAGGATTATAAATCATTCTACTATAAAGACACATGCATACGTATGTTTATTG
CAACACTATTTACAATAGCAGAGACATGGAACCAACCTAAATGCCCATCAATGATAGACTGGATAAAGAAAATGTGGTA

Fig. 9.13

CACATACACCATGGAATACTATGCAGCCATAAAAATGAATGAGATCATGTCCTTTGCAGGGACATGGATGAAGCTAGAA
GGCATAATCCTCACCAAACTAACACAGGAACAGAAAACCAAATATCGCATGTTCTCACTCATAAGTGGGAGTTGAACAA
TGAGAACACATGGACACAGAGAGCGGAAAAACACACATCCAGGCCTGTTGGGATGTGGGGGGTGAGGGGAGGGAACTTA
GAGGATAGGTCAATAGGTGCAGCAAACCACCATGGCACATGTGTACCTATGTAAGGAACCTGGACATTCTGCACATGTA
TCCCATTTTTTAGAAGAAATCAAACAAACAAACAAAAAACTCATTTCCTTGTAAATTGCTCAGTCTCAGGTAGTTCTTT
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AAATAAATTCTTCCCAGTAGAAAAGAACACTCCAGGGGATATAGTTAATGCAAGACATTAACCAGTTTTATATCTCTTT
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CTATTTTATTGGTTCCCATAATAATGAGTTAAATAAATCTTTGATACATGCTTACTTTATTTTATATGAGAGTCAGGTT
TTTAAAATTATACTTTGACAAATGAAAGTCCTCAGTGAACATGTACTACATCTTGAAAAAAAGGATGGCCTGGGGCTGA
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CATATATTAAACATCAGATGGAATCAACTGTCAAGAATATAATTAAAAAGGTGGAAGGACTATGCTGTGAAAAAAATCT
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TTGTTAATTGAAAAATCTCAACTTTTTTATTGCCCAGCAGGGTAGAGGCTTGCTCAGAAGCTTGGACTAGCAAACATAA
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CTCAAAGCTATCTACAATGGGTCAGGCAAAATAACCACAATATGGGTTTGTACATAATTTGGGAAGGAGTTCTTCTCCT
GTCCCTTCTTCCTTTGGCAATGCCTCTTAAATCACAGTTGTGTTGGTTGAACAGCTCTATGAATATATGAAAAGCCACT
GAATTGTGCACTTAATTGGGTGAGTTGCATGGTATGTAAAATACATCTTAATAAAGCTGACACCCCAAGAAAATCACAG
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TCTAGGCTCAGAAATTTGGCATGAATCTTGGCAGTAGGTGACACAGTTCAGGTCACACCACAAAGCAATCTGGTGTAGC
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AGATGCAGTCATCCCAGGTGGGAGTGTTCGTGCAAGCCAAGCTTATGTGCCATGCACCAGATGTCAGTGGATGGGGGTG
TGTGAATCTGTTAGGTAGCAGAGCACAGTTTGCCACCAAAATATACACAATGTAGCATTTCCCCACAATTGCCCATTAA
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GAGACGGAGTCTTGCTCTGTCACCCAGGCTGGAGTGCACTGGTGCGATCTCGGCTCACTGCATCCTCCCTCCCAGGTTC
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CCCAAAGTACTGGGATTACAGGCGTGAGCCACCGCGCCCATCCAAACTACATTTTTAAAAAAAGTTAAAAAGCAAAAAC
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GGACCATTGTTACAAGGTTGAGAACTGTGAGTGTACGGAAACCCAGGGGAAACATTTTTCCTCATTTACTTCTCAAAAT
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TTCACTCCTATTTTCTTGCTACTATCCTGTTTTGGGGGCAGGGCAACTCTACCCTGGGGAACGATCAAATGTTTAGGCA
AATATATCCTGGTGTTATAAGCTCATTAAATTTCTTGTCATTTCTTGCAGTGTGCTGGGAAGTGCTGTTTGTGGCCCGT
TTTTGCAATGTAGAACCTCTCTTTTGTGAGAGCCATGGAAGTTCCTTATTTGATAATTAGTCTCTTGCTTTAGGCAGTG
CCATTAAGAACTCCATATAAGCTGCCAACACTTTGTGGATGTGCAGAACCCCGTAAGCTTCCTATAGCTACTATTGCAA
GTAAAATTTTCAGATGCTTCTGAAGTCTTACCCACTTATCTTGGCGTAGAGGTTCTCAAGCTTCAGCACTGGAGGATCA

Fig. 9.14

CCTGGAATTGCTCGTTAAGACACACATTGCTGGGATCCACCTCCAGGGTGTCAGAGTCAAGTCTGGGGTGAAGCCTGAG
AATGTGCATGTCTAACCAGTTCCCAGGTGATGCTGATGTTGCTGGTTTTGAGACTATATTTTGAGATTAAGAACTGCCT
TGGATTAAGAGCTGACCTGCGATCTACAGCTCAAATAGTGAAGTAAACATCCTAAAGAAAATGGAAAAACCAGTGCAGT
GAGTGATTGAATTACTATTTGTTCAATATCACAGAGAGCATAGTATTACATAAGGGCTTTGGGGAATATTTTAGGTAAG
TATATATAACTCTTGCCACCTAGGATGTTCATAGTAACTATAAGACAGTATTTTTGTTTTCCAAGTAATTTTAATGATC
CTGTAGATCCTCTTCCTTTTTGTATATAATATCAATCTAATAGTTTCTTGTTTAATATAAAAATGAAATCTTATTTTAC
ACAAGCAGCAAGCAGCTATTTTTTCAGATTTTCCCCCTATAATCTAAGGGAAAGTTATTTTAAAATAGAAAAGATGTGG
GCTTCAAAAAAAGCTTTGCAAATATGTTGCAATAATACGAATGATTTCAGTGTTGAAATCCATTTGTGAAAGCAGGCTT
TGCTTATATTTTGGGTCCTGCCTTCTATAAAATGCTCAGATTTGCTTTTATTAAGATCATACACTCAGTGACCTGAGGA
CCAGATGGAGGTTATAAGCAGCTCTTTAAGGCTTCAGAGCTTAGCCTAGAGAGTCAAACAGCTCTTTGAACTGGCGTCT
CAGCTCTGTCATTTAGGCAAATTGTTTATTTTCTGCAAAGAACCAGCCTTAGGCTTTGTTGATCTACGTATGTATATTT
GTTTTTTATTTATTTGCATTATTTCATTCATTCTGTTTTCTTTGACTTTAATTTGCTAGTTTTCTTTGAAGCTTGTGAG
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TCCTGTGTCCATGTGTTCTCATTGTTCAGTTCCCACCTATGAGTGAGAACATGCGGTGTTTGGTTTTTTGTCCTTGCAA
TAGTTTGCTGAGAATGATGGTTTCCAGCTTCATCCATGTCCCTACAAAGGACATGAACTCATCATTTTTTATGGCTGTA
TAGTATTCCATGGTGTATAGTATTCCATGGTGTATATGTGCCACATTTTCTTAATCCAGTCTATCACTTTTGGACATTT
GGCTTGGTTCGAAGTCTTTGCTATTGTGAATAGTGCTGCAATAAACATATGTGTGCATGTGTCTTTATAGCAGCATGAT
TTATAATCCTTTGGGTATATACCCAGTAATGGGATGGCTGGGTCAAATGGCATTTCTAGTTCTAGATCCTTAAGGAATC
GCCACACTGATTTCCACAATGGTTGAACTAGTTTACAGTCCCACCAACAGTGTGAAAGTGTTTCTATTTCTCCACATCC
TCTCCAGCACCTGTTGTTTCCTGACTTTTTAATGATTGCCATTCTAACTGGTGTGAGATGGTATCTCATTGTGGTTTTG
ATTTGCATTTCTCTGATGGCCAGTGATGGTGAGCATTTTTTCATGTGTTTTTTGGCTGCATAAATGTCTTCTTTTGAGA
AGTGTCTGTTCATGTCCTTCGCCCACTTTCTGATGGGGTTGTTTGTTTTTTTCTTGTAAATTTGTTTGAGTTCATTGTA
GATTGTGGATATTAGCCCTTTGTCAGATGAGTGGGTTGCAAAAATTTTCTCCCATTCAGTAGGTTGCCTGTTGACTCTG
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GGTGTTTTAGACATGACGTCCTTGCCCATGCCTATGTCCTGAATGGTATTGCCTAGGTTTTCTTCTAGGGCTTTTATGG
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CAGTGGTTTGTAGTTCTCCTTGAAGAGGTCCTTCACATCCCTTGTCAGTTGAATTCCTAGGTATTTTATTCTCTTTGAA
GCAATTGTGAATGGGAGTTCACTGATGATTTGGCTCTCCGTTTGTTATTGGTGTATAAGAATGCCTGTGATTTTTGCAC
ATTGATTTTGTATCCTGAGACTTTTCTGAAGTTGTTTATGAGCTTAAGGAGATTTTGGTCTGAGACGATGGGGTTTTCT
AGATATACAATCATGTCATCTGCTAACAGGGACAATTTGACTTCCTCTTTTCCTAATTGAATGCCCTTTATTTCCTTCT
CCTGCCTGATTGCCATGGCTAGAACTTCCAACACTATGTTGAATAGGAGTGGTGAGAGAGGGCATCCCTCTGTCTTGTG
CCAGTTTTCAAAGGGAATGCTTCCAGTTTTTGTCCATTCGGTATGATATTGGCTGTGGGTTTGTCATACATAGCTCTTA
TTATTTTGAGATACGTCCCATCAATACCTAATTTATTGAGAGTTTTTAGCATGAAGGGTTGTTGAATTCTGTCAAAGGC
CTTTTCTGCATCTATTGAGATAATCATGTGGTTTTTGTCTTTGATTCTGTTTATATGCTGGATTACGTTTATTGATTTT
CATATGTTGAACCAGCCTTGCATCCCAGGGATGAAGCCCACTTGATCATGGTGGATAAGCTTTTTGATGTGCTGCTTGA
TTCGGTTTGCCAGCATTTTATTGAGGATTTTTGCATCAGTGTTCATCAAGGATATTGGTGTAAAATTCTCTTTTTTTGT
TGTGTCTCTGCCAGGCTTTGGTATCAGGATGATGCTGGCCTCATAAAATGAGTTAGGGAGGATGCCCTCTTTTTCTATT
GATTGGAATATTTTCAGAAGGAATGGTACCAGCTCCTCCTTGTACCTCTGGTAGAATTCGGCTGTGAATGCGTCTGGTC
CTGGACTTTTTTTGGTTGGTAAGCTATTATTATTGCCTCAATATCAGAGTCTGTTTTTGGTCTTTTCAGAGATTCAACT
TCTTCCTGATTTAGTCTTGGGAGGGTGTATGTGTCCAGGAATTTATCCATTTTTTTCTAGATTTTCTAGTTTATTTGTG
TAGAGGTGTTTATAGTATTCTCTGATGGTAGTTTGTATTTATGTGGGATCGGTGGTGATATCCCCTTTGTCATTTTTTA
TTGCATCTATTTGATTCTTCTCTCTTTTCTTCTTTATTAGTCTTGCTAGCGGTCTATCAATTTGTTGATCTTTTCAAAA
AACCAGCCTCTGGATTCATTGATTTTTTGAAGGGTTTTTTGTGTCGCTATTTCCTTCAGTTCTGCTCTGATCTTAGTTA
TTTCTTGCCTTCTGCTAGCTTTTGAATGTGTTTGCTCTTGCTTCTCTAGTTCTTTTAATTGTGATGTTAGGGTGTCAAT
TTTAGATCTTTCCTGCTTTCTCTTGTGGGCATTTAGTGCTATAAATTTCCCTCTACACACTGCTTTGAATGTGTCACAG
AGATTCTGGTATGTTGTGTCTTTGTTCTTATTGGTTTCAAAGAACATCTTTATTTCTGCCTTCATTTTGTTATGTACTC
AGTAGTCATTCAGGAGCAGGTTGTTCAGTTTCCATGTAGTTGAGCGGTTTTGGGTGAGTTTCTTAATCCTGAGTTCTAG
TTTGATTGCACTGCGGTCTGAGAGACAGTTTGTCATAATTTCTGTTCTTTTACATTTGCTGAGGAGAGCTTTACTTCCA
ACTATGTGGTCAATTTTGGAATAGGTGTGATGTGGTGCTGAGAAGAATGTATATTCTTTTGATTTGGGGTGGAGAGTTC
TGTAGATGTCTATTAGGTCTGCTTGGTGCAGAGCTGAGTTCACTTCCTGGGTATCCTTGTTAACTTTCTGTCTCATGGA

Fig. 9.15

TCTGTCTAATGTTGACAGTGGGGTGTTAAAGTCTCCCATTATTATTGTGTGGGAGTCTTAGTCTGTTTGTAGGTCTCTA
AGGACTTGTTTTATGAATCTGGGTGCTCCTGTATTGGGTGCATATATATTTAGGATAGTTAGCTTTTCTTGTTGAATTG
ATCCCTTTACCATTATGTAATGGCCTTCTTTGTCTCTTTTGGTCTTTGTTGGTTTAAAGTCTGTTTTATCAGAGACTAG
GGTTGCAACCTGTGACTGTTTTTGTTTTCCATGTGCTTGGTAGATCTTCCTCCATCCCTTATTTTGAGCCTATGTGTGT
CTCTGCACATGAGATGGGTCTCCTGAATACAGCACACTGATGGGTCTTGACTCTTTTTCCAATTTGCCAGTCTGTGTCT
TTTAATTGGAGCACTTAGCCCATTTACATTTAAGGTTAATATTGTTATGTGTGAATTTGATCCTATCATTATGATGTCA
CCTGGTTATTTTGCTCGTTAGTTGATGCAGTTTCTTCCTAGCCTTGATGGTCTTTACAATTTGGCATGTTTTTGCAGTG
GCTGGTACCGGTTGTTCCTTTCCATGTTTAGTGCTTCCTTCAGGAGCTCTTTTAGGGCAGGACTGGTGGTGACAAAATC
TCTCAGCATTTGCTTATATGTAAAGTATTTTATTTCTCCTTCACTTATGAAGCTTAGTTTGGCTGGATATGAAATTCTG
GGTTGAAAATCCTTTTCTTTAAGAATGTTCAATATTGGCCCCCACTCTCTTCTGGGTTGTAGAGTTTCTGCAGAGATAT
CCGCTATTAGTCTGATGGGCTTCCCTTTGTGGGTAACCCGATGTTTGTCTCTGGCTACCCTTAACATTTTTTCCTTCAT
TTCAACTTTGGTGAATCTGACAACTATGTGTCTTGGAGTTGCTCTTCTCGAGGAGTATCTTTGTGGCATTCTCTGTATT
TCCTGAATTTGAATGTTGGCCTGCCTTGCTAGATTGGGGAAGTTCTCCTGGATAATATTCTGCAGAGTGCTTTCCAACT
TGGTTCCATTCTCCCCGTCACTTTCAGGTACACCAATGAGACGTAGATTTGGTCTTTTCACATAGTCTCATATTTCTTG
GAGGCTTTGTTCATTTCCTTTTACTCTTTTTTCTCTAAACTTCTCAATTCATTTCATTCATTTCATCTTCCATTACTGA
TACCCTTTCTTCCAGTTGATCGAATCGGCTACTGAAGCTTGTGGATGCATCACTTAGTTCTCGTGCCATGGTTTTCAGC
TCCATCAGTTCATTTAAGGACTTTTCTACACTGGTTATTCTAGTTAGCCATTCGTCTAATCTGTTTTCAAGGTTTTTAG
CTTCTTTGCGATGTGTTCGAACTTCCTTCTTTAGCTTGGAGAAGTTTGATCATGTGAAGCCTTCTTCTCTCAACTTGTC
AAAGTCAATCTCCATCCAGCTTTGTTCTATTGCTGGTGAGGAGCTGCATTCCTTTGCAGGGGGAGAGGTGCTGTGATTT
TTAGAATTTTCAGCTTTTCTGCTCTGTTTTTTCCCCATCTTTGTGGTTTTATTTACCTTTGGTCTTTGATGATGGTTAC
GTACAGATGGGGGTTTTGTTGTGGATGTCCTTTCTGTTTGTTAGTTTTCCTTTTAACAGTGAGGACCCTCAGCGGCAGG
TCTGTTGGAGTTTGCTGGAGGTCCACTCTGGACCCTGTTTGCCTGATATTACCAGCAGAGGCTGCAGAACAGCGAATAT
TGCTGAACAGCGAATATTCCTGAACAGCAAATATTGCTGTCTGGTAGTTCCTCTGGAAGCCTCATCTCAGGTGGGTACC
TGGCCATGTGAGGTGTCAGTCTGTCCCTACTTGGGGGTGCCTCCCAGTTAGGCTACTTGGGTGTCAGGGACCCACTTGA
GGATGCAGTCTGTCCGTTCTCAGATCTCAGACTCCTTGCTGGGAGAACCACTACTCTCTTCAAAGCTGTCAGACAGGGA
CATTTAAGTCTGCAGAGGTTTCTGCTGCCTTTTGTTTGGCTATGCCCTGCCCCCAGAGTTGGAGTCTATAGACGCAGGC
AGGCCTCCTTGAGCTGAGATGGGCTCCACCCAGTTCGAGCTTCCCAGCCACTTTGTTTACCTACTCAAGCCTCAGCAAT
GGTGGGGCGCCCCTCCCCCAACCTTGCTGCTGCCTTGCAGTTCGATCTCAGACTGCTGTGCTAGCAATGAGCGAGGCTC
CGTGGGCGTGGGACTCTCCGAGCCAGGCNCGGGATATAATCTCCTGATATGCCGTTTGCTAAGACCATTGGAAAAGTGC
AGTATTAGAGTCGGAGTGACCTGATTTTCCAGGTGCCGTCTGTCACAGCTTCGCTTGGCTAGGAAAGGGAATTCCCTGA
CCCCTTGTGCTTCGCAGGTGAGGCGATGCCTCACCCTGCTTCAGCTCACACTCGGTGCACTGCACCCACTGTCCTGCAC
CCTGCAGTGTAGCAAAGTTTGAAATGTAGATAGCCAGAAGTCAGTCTGGGGGAAAGCAATTCCAATTTTCAAGCTTGTA
AAATTGTTTTCATTGATTTCTACTCAAATTTGAAATTCTTTCCTGTCGTCAACATGTTTGATGATGCCTAATATGAGCT
ACAAATTCACTATACCATTTTTTTCTTTTTTGCTGGAACATGTATAAAATAGAATATATCTGAATTTCCATGTAGGGCT
GAAACATGCTGTCATAATAGAAACAATATGCCTACATCTCCGTCTCTCTTTCTGTGTGTGTGTGTATGTATGTGTGAAG
TCATATGTTTTATGCTTTCCTATATATCAGATTATGTTTTAGCATTTCAGAGGCACTGTGTCCTGCTAAAATCCTGTGT
TTCCAGATGAAATGGCAAACATTATTTCCAGCAATGTGATAAAACAACCAAAGAAAGTGTTCAAGTGACCCGATTCATA
AAATTCACCAATAAGTCAATATATGCAGTAAAATAGTTATTACAAGAGTAGCTAAGAGTAATTAATATGAGTAAGTCTG
TAGCTTAACACAGTAAAGTATCACTTTTAAATGCATTTGCATTTCTCATGGGTGAGGGTTAGCAAATTCTGACCTGGAA
ACCAAATCCAGCCTACTGTTTTATTTGTAAAAAATTACATTTGAACACAGTCCTACCCATTTATTAACTTACTGTTTAT
CACTGCTTTTGTTCTAGAAAAGCAGAGTTGAGTAGTTGAAAAAAAGACTGTGGCCAGGCACAATGTCTCATACCATAAT
CCCAGCACTTTGGGAGGCCAAGGTGGATCACTAACTGGTCACTAACTCTTGGGCTCAAGTGGGTGGATTACTTTAGCCC
AGGTGTTAGTGACCAGCCTGGGCCACATGGTGAAACCCTGTTTCTACAAAAAGTACAAAAATTAGCCGGGAGTGGTGGT
GTGAACCTGTAGTCCCAGCTACTGGGGAGGCTGAGGTGGGAGGATGACCTGAGCCTGGGAGGTCAAGTAAGGCTGCAGT
GAACTGAGATCATGCCACTGCACTCCAGCCTGAGTGACAAAGTGAGATCCTATCTCCAAAAAAAAGAAAAAAAAAAAGA
CTGTAATATAAGACCCCCAATGTCAAAAATATTTACTATCTGATCCTTTACAAAAGCGTTTGCTAACTCCTGTCCTTGT
GTATGCTTTGATTTCATATTAATTATATCTTATGTTATTTATGATACATATATGANATACACATATATATCTAATATGT
TATATATTTAAGAATTATTCACTATGCCACAAACTGTAGATACAAAAGAAGTATCTCTAGGGAAAGCCAAAAACAAACA
TGGAAAGAAAGAAGGCTAGCAGAAGCTTCAAAATATCAAAAACTCTCTTACTGTGTGGCAATATAAACTAAAAACTGAT
GCTCAAAATCATGAAGATAGGAAAAAGAATCAAGACAACCAAAAAATATGGTTAATAAAAATGAAGACAGAAGACATCA
AGATGTTTATGAGAACCAGGGTCCTTTCAAACAGGGGGTGAAAAAGGAGTGAGAAGATGTGCATGGCAGTGAAGAAGAA
CTTAATTTGCACACAGTCAACGGGGGGGTGGCAGGAGGGCCAACACAGCTGCATTTCTACCACATTATTTATTTTGGT
AAGTACTGTCATCTTTTGTTATGAGCCATATTTCATTCAACAGTGTTTAATGACTTTTTTCCAAATCATTACTCCATAA
TATTTACTGAGAATCAAACAGAACTTACAATAGAAAAAAGAGATACTTCTTAATTAGATATTTTGGAAAAAAATCATTG
TCGTGTGACAAGACAACCAAAGAGTAGTCAGCTAAACCTATAGAAATGAAGTATTCTAAAAATGTGTCAGACAGCTAAT
TAACACAATATTTTATTTTTCTAAAGATCTTGCAGTGTTTGTCATCTTTATCACCTTTTAAAAGTTTGCATTTTATTGT
CACTTTTAAAATTTTTAAATAAATGTCCATTTTGTATCTATCATTCTGTGTCTTTATGTAATAGTATCTAATATTCTAT
ATCTGTATCAAATATTCTGTATGTACTTCATATTCATTTTATCTTATTTTATTTATTTATTTATTTATTTATTTATTTA
TTTATTTTAGACAGAGTCTTACTCTGTCTTCCAGGCTGGAGTGCAGTAGCACAATCTTGGCTCACCACAACCTCCACCT
CCCGGGTTCAAGCAATTACCCTGCCTCAGCCTCCTGAGTAGCTGGGGTTACAGGCACACGCTACCATGTCCAGGTAATT
TTTGTATTTTTAGTAGAGATGGGTTTTGCCATGTTGACCAGGCTGGTCTCAAACTCCTGACCTCAAGTGATCTGCCCCC

Fig. 9.16

CTTGGCTTCCCAAAGTGCTGGAATTACAGATATGAGCCACCACATCCAGCCCCATTTTACCTTAATTTGTAAGAATATA
TAATTATATTTATAATTTTATTCATTTTATATTAATTTTTCTATTTCTTAAAGGCTAAATCTCTAGTTTCCTTTTTATT
TTTCAGGTAGAGGATTTTAATTCACTGAGTACCTGATCATTTTACATACCTAGTCAAATAAATATGAAATTTGAAGAAC
TAAGATTAAGTTTTAAAAATTCTTAAGTGCATACAATCCATTGAAGAAAACAAAAATTGCTTAAGCAGTTTTTAAAACC
TTGATAAGAGGTCATCAACATGATTTAAATGTGAAATTAGCTAATGTAAGTAGCAGTTAGAATGAGATTTAGCTTATAT
ATTTGGAGGTATAATGGAAAACTCTGGTGAGGACTCTTTTATTGCACACCAAGAGAAACATGAGAAAGAAAAATGAGTT
GCATTTTTCTGCATTTTTCCAGAAGTGAAATGCTTTGCAACATCCTCAGAAAGAAAGAGAATACATGAGTAATATGAAA
GAAAACTATATAAAGGATTTAATTATTTCCAAATTGCCTGGGTGTTTTTTAGTGCCTGCTTTTTTTTTCAAGCAGGAA
TAACTGTAGAAACTTTTATTTATTTATTTTTAAAGGAATGGTTACTATTCTTAGGAAAAGTGGCAGTAAATATAGTTAA
TAACGGTAATTATAATTTTATAAACTCATTCAAAAGTCTTGATTTTAAAGGCGATAGTAAAAAAAATATATATCTATTT
ATCTTGTTCCCTGAAAAATGGTAGCACTCCTGACCACTGAGAGACTGTTCTCCTCGGCATAATTGATGGCCTTCAAAGC
CATCATACTTCAGTATTCAATGTCAAAGATTTATTTCCATTTGCAAAATTTGCTTAGAACTCACCTATATTTACCTTTC
CTCTTATGACTTATAAGATAATATTAACATCTACATAACAGAATCTCACTCACAGAATGTTTGAGCCACGAAGGTGCTC
TGAGACCCTCTGCCTCAACAGCCTCATTCATAGATGAGAGAAGCCCAGAGAGGTGAGGACGCCTTCCAAAGCTCTAGCA
CTTGTTTCTAGACATGGAACCAGGACAGCCCTTGGCATTTCCCACCACATTTTCCTGCTTATTATGTGGCATGAGCTTG
TCTTTAACACTGAATTAGAATTATTGCACATTACATTGCATTCATCAAGGCCTACCCTTCAGGCAGTCTGATGTAACAG
TCTATTATAAGACATCCGAGAAAAACCATCCACTATCCTTTCAGATGTTCTCAAAACAATTTGTATTAAGAGCTAATAA
AATGAAACAGAAAATGCCAGGTAAACTTTTTAAAATAAAGATTTTGTGATTCATTGGGTTTAATTATTGGTTTTATTTT
AGCATTACTTTGATACATTTCATGAAGTATACAGACAGAACTAAAGCCACATTTAAAAGGCAATTAATAAAACCCAGAC
ATTATGATATAATTTACATACATTTAGATATATTTAAAGTGTACAGTTCATTTATTTAGTATAACCACAGAGTTGTGCA
AACATCACCACCATCTAATTCTAGAACATGTTAGAACCCCAAAAGAAACTTCATATTCATTAGCATGTTGCATTCCTGG
CAGCTCCCTCTTGCCACCCTGTACCCTCAGTCCTAGGCAACCACTAAACAACTTTCTGTCCTCATAGACTTGTCTATTC
TAGACATTTCCTATAAATGGCATCATACGATATGTGGTATTTTGTGACTGGCTCTGGCTTCTTTCACTTAGTATAATGC
TTTCACATTTATCATGTAGCATTTGTAAGTGTCTTTCCCTTTTATAGCTGAGTAATATTCCATTGTATGTGTATTCCAC
ATCTTTATTTATCCATTCATCACTTGATGAATATTTGGATGGTTTCACTTTTTGGCTACTATGAACAATGCTGCCATG
AACATTTGTGAACAAGTTTTAGTGTGGCATTATGTTTCCATTTCTTTTGGGTACATATCTAGAAATAGAATTACTGGGT
CATAGGGTGACTCTATGTTTAATATTTTGAGGAATTCCCAGACTGTTTGCAAAGTGACTGCATCATCTTACAATCTCAC
CAGTAAGTATGGCATGAGGATTCCAATTTCTTCACAGCCTTGTAAAAAGGAAAATTTTACAATTATAATTATTTGGCAA
AAATTCAATGAATTTTTTGAGCATCTATTTTGTGAAAGGTCTTTTTTGAGGTGCTATAATTTTTTAACACTATCAATTT
TTGTGGAAAAAATTAGAACTTTTCTAAAGGACATTATTTTTAAAGTTTATTACTTATTATTTATTAATTTTTATTAATA
CATAATATTGCTATGTATCAGGTACATGTGATAGTTTGATACATGCATACAGTATATAATGATCAAATCAGCATATTTA
GAAAATCCATTACCTCAAGCATTTATTTCTTTGTGTTTGGAACATTTCAGAACTTCTCTTTCAGCTATTTTGAAATATG
CAATATATTTTTTGTTAACTATAGACACTCTATTGTGCTATTAAACACTAGAACTTATTTCTTCCACATAACTGTATGT
TTGTACCCATTAACCAATCTGTCCTCATCCCCCCAGCCCTTTCCCAGCCTCTGGTATCTATCATTCTATTCCCTACCTC
CATGAGGTCAACTTTTTAGCTCCCACATATGAGTGGGAACATGTGATACTTGTTTTTCTGTGCCTGGTTTATTTCACTA
AACATAATGACTTGCAATTCCATCCCTGTTGCCGCATATGATGAGATTTCATTTTTAATGGCTGAATAGTATTTTGTTG
TGTATATATACCATATTTTCTTTATTCATTCATCTGTTGATGGACACTTAGGTTGATTTCATACCTTGGCTGTTGTGAA
TAGAGCAGCAATAAATATGGGGGTACAGTTGTCCCTTTGATTTATTGATTTCCTTTCCTTTGGACAGAGAGACAGTAGT
GGGATTGCTGGGTCAGATGGTAGTTCTATTTTTAGTTTTTAAAGACACTTTCATACTGTTTTCCATAGTCGTTGTACTA
ATCTACATTCCCAACAATGCATAAAGAGTTCCCTTTTCTCCACATAATCACCAGCATGTGTTATTTTTTTGACTTTGATA
ATAACCATTCTAACTGGGGTGAGATGGTATCTCATTGTGGTTTTGATCTGTATTTTCCTGATGATCCGTGATGTTGAGC
AGTTTTTCCTAAACCTGTTAGCCATTTGTCTTTTTAGAAATGTCTATTCATGTCCTTTGCTCACTTTTTAGTGAGATTA
TTTGATTCTTTGCTGTCGAATTGTTTTGAGTTCTATGTATATTCTGGATATTAGTCCCTTGTTGGATGAATAGTTAGCA
ATTTTTTCTCCATTGTTCATGTTATCTCTTCACTCTGTTGATTGTTTCCTTTCCTGCGCAGAAGCTTTTTAGTTTAATG
TCGTTCCATTTGTCTATTTTTGTTTTGGTTGCCCCTGCTTTTGAGATCTTAGCCATAAAATCTTTGCCTAGATCAATAT
CTTGAAGCATTTCCTCTATGTTTTCTTTTAGTAGTTTTATAGTTTCAGGTCTTGTATTTAAGTCTTTAATCCATTTTGA
ATTGATTTTTATACATTGTGAGAGATAGAGGTCTAGTTTCATTCTTCTGCATGTGAATATCCAGTTTTCTTAGCACAAT
TTATTGAAAAGAATGTCCTTTCCTCAGTGTATGTTCCTGGCAACTTTGTCAAAAATTGGCTGGCTGTAAATATGTGAAT
TTATTTCTGGATTCTCTGTTCTGTTCCACTGGTCTGTGTATCTGTTTTTATACCAATAGCATAGTGTTTTGGTTGCTAT
AGCTTTGTAGTATATTCTGAAATGTGTTAGTGTGATTGCCTTCAGCTTTGTTCTTTTTGCTGAGTATTGCTGCTATTTG
GGCTCTTCTATGGTTCTATGTGAATTCTAGGATTGTTTTTTCTATTGATTCAAAGAATGTCATTAGTATCTTGATAGGA
ATTGCATTAAATCTATAGCTTACCTTGGGTAGTATAGTCATTTTTAACAATATTAATTGTTCCAATTCATGAGCATAAT
ATGTCTTTCTATTTTTGGTATCCTCTTCAATTTTGTTCATCAGGGTGTAGTGTTTTTTGTTTTGTTTTGTTTTGGCTTT
CATAGAAATCTTTCACCTCCTTGGCTAAATTTATCCCTGAGACTTTTTTGAAGTTATAAATGAGGTTGCTTTCTTGGTT
TCTTTTTCAGATAGTTGGTTATTGGTGTATAAAAACACAACCGATTTTTATATTGATTTTGTGTCTTGTAACATTACT
GAATTTGTAAAATCATGTCATCTGAAGTAGAGACAATTTGGCTTCTTCCTTTTTTTTTTTTTTTGAATTGGAATCTCTCT
CTGTCATCCAGGCTGGAGTGCTCTGGTGTGATCTTGACTCACTGCATCCTCTATTTCCCAGGCTCAAGTGATCCTCCCA
CCTCAGCCTCCTGAGTAGTTGGGACTACAGGTGTGTGCCACCACACCTGGCTAATTTTTGTATTTTTCATAGAGACAGG
GTTTCATCATGTTGTCTAGTCTGGATTTGAACTCCTGGGTTCAAGCAATCTGCCCACCTCAGCCTCCCGAAGTGCTGGG
ATTACAGGCTTGAGCCACCACAACTGGCTGGCATCCTGTTTTCCAGTTTGGATGCCTTTCATTTCTTTCTCTTTCCGGA
AAGAGAAAGTCTGGCTAGGACTTCCAGTATAATGCCGAATAAGAGTGCTTAGAGTAGGTGTCCTTGTCTTATTCTAGTT

Fig. 9.17

CTTAGAGGAAAGGCTTTCAGTTATTCCCCATTCAGTATGATGTTAGCTGTGGGCTCGTCATATATGGCCTTTATTATGT
CAAGGTATGTTCCTGCTATACCTAATTTGTTGAGAGTGTTCATCATGAAGGGCAGGGTGAAAGGGATTCTTTTCTGAAG
GAGGTTGTGTCACTCAGTGTCTGATGAGGATATAGAAGTCAGTGTTTGGTGAGAGATAGTAATTTGAAGAGGGAACATT
TACTATAAAGAATTATTAACTGGCAAAATGTGATAAACTACAAAAGGGGTAAATTGTATGCTAAATAACACAGAAATAG
CAAACATAGGGAAGAGCTGCTACTTCTAGGACTGAGGGAGGATACCCAAGAAAAGAACAAACATGGAAGGGTCTTTCAC
ACCTNAAGGCTGAGATTCAGACCTTGTTGGAGAGGGTGGTGCTGTGGCCCGCAGGATAGAAAAGTTCTTTGAGGTGCCA
CAGGCCAGGCCTGGTGAGTAGGGTACTGGCTGTTGGGTGCCAGTGGATCAGCACTGTGGTCAAAAAAGTGCCTTCTAGG
GTGCTGGAAAAACCCACTGGAAGGTGGTCACCATTGGGTCTCCTGCATACTGCTGGCAAGGAAATTGCCTGCTCGGGTG
ACAATAAAACTCAGTAGGAAGCCCTCACTAGGTGCTGGTGGAACTCACTGTAGGGTGACTCTCCCATACACCACTGGTG
GCGGCCACAGGTAACAAGAACCAGGAAGAATCAAGAAGGAATGCTCCTTTATTTGCTATACCTTGTTTTATTTTATTTT
ATTTATTTATTTTTTTGAGACAGAGTTTTGCCTTTTTTCCCTGGCTGGAGTGCAATGATGCGATCTTGGCTCACTGCAA
CCTCCACCTCCCAGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGTGCGTGCTAATTTTGT
ATTTTCAGTAGAGATGGGGTTTTACCATGTTGTCCAGGCTGGTCTCAAACTCCTGGCCTCAGGTGATCCTCCTGCCTCT
GCCTCCCAAAGGGCTGTGATTACAGGCATGAGACACCGCATCTGACCCCTTTACTATACCTTGTAGTGTCTCCCCTACA
CTCTACCAGCAACAGATGACATTGCACTGGCTGACCGAGGAGCCAGATTAGTATCGTGGAACAGGGCAAAGAAGGGTGG
ATTTGGAGCGGAGAGGCAATATATTGATAACTGTCTTGGTGAACTCCTTTGGCTTCTTAGCTTCCACATGCACCATTTT
ATATATATATTTGAACTCTGTATAACACAAAGTCAACTCTGTTCTTCAGAGAAATGCAGAGTTCTCACCCCTTTCCCCA
AATGAGGAGACACACAGTTCCAACAGTTATCGTAGTCTCATCTGGCTGTCTTAAATACTCCTCAAATCAAAGTCCCACT
GAATATTCTCTTACCTAAAGGCTAAATTGTAGAGTTTATATTCAACAACTTTCATAAAATAATGAAGAGAGAAAAAGGA
AAATGGTTAATATATACAAATACACACATATACATCACATGCAAAGAGGAAATACACAAAACTGTCAGAATTCTCAGTT
TTGTAATTGATTGAGAGGCCATAGTTGGTATCTATGGCTTCCTTCTTCTACTGCCTATTCTGTATTTCCATTGCCCTTA
AATGGTCAAGGTTCTTTATCTGGGGAGTGATCCAAACTTTCATTTCTCAACAGCCTGAATCCTCAATAATCCTGCCCCC
TCCTTTTGACTCCTGCGGTTTCCCATTAACCTTTATTTCACACCTTGAGTCCAGGTTCCAGGGAGTTAGCTAATATTGG
AGATGACGCATCTGGTCGTAGGCAGGTGTCTGGTGAGATGGCTGTTTTTCCCTTTGGTCCTGGTCCTTGGACCTCATAC
ATTGCTGTTGAGCCATTGCTTGTTTCTGTCTACATGGCATATTTACCTCAGGAGGCTCTTTCCACTATCTTCATGTGAT
ACTTGAGGGAGCTGCATCATCACAGTTTCTTGCTTCTCCAAAACGCTGGGGTGGAGGGGGAAGGGCAGTGGGGTGGGGG
AAGAGGGATCCAGAATCCCTGCACGGACTCCTCTGGCTGGATGCCAGATGCAGCCACTCTCTTCCCCATCTCTGTGCTC
CTTTTCTGGGTGGTGGTAGGGTGAGGTGGGAAATTACTTTCTTGTTGGTCTTGGATACTTTGCAAAGACATCAGTACAT
TTTGTTAGCTTTAAAGGTTTAGTTCTTAGCACTTTGCCATCCTGGGAAATCAATGCCAGCAAATCCCATAGAACTTGTC
TGCTTTTTGCTTCAATTTACCCGTCCCTGAAGACAATAAACAAAGAGATGGCATTCTGCTTATAAAAGGGTAGTATAGT
AAAAAATGAAGAAAATATATCTCACAACTCATTTCCCATCTTTTAATAAATAGTGATAGACTTAAAATAGCTAAGATTG
AAAATGATGCCTATTTGAAAATTTACTAAGTAATTACATTCTAGCAGTTATACATGAGATATTTATTATATATCACATG
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TGGAAAAAGTAAACACAGCATAAAACACTCATCAATTTTTAGAAGTTAAGAATGTGCTTTATGTAGTTTATCCTAGAAA
AATCCTCAAGTTATATAAACTTTTAGATTATGAATGAGTTATGGTCATTTGGAGATGGCAACAGAGCAACTGGCAGGTT
CAAGAATTTATACACAAAGGTGAAAGGCTTTTTGAAACAATCAGAGTTTTCTTTCAAGTCTAACTTCCTGAGTAATTTA
TCTGAGAAATTGTGAGATGACATGCAGGAGGACTTTCAAAATCATCCCAGTGTCCCTCAATCAATCTGGTTCAAATATG
CAGAATTGGAGGACAGGTCAAGAAAGCAGACGCTGAAACAGGAGGAAATGAAGTCGGCTTATTGTGAACATGACTTTTT
CCCATCTAAAAAAAGATGATAGTTTACATTGTTTTGAGAATTGTGGAGTGGGAGAAGCAGACCAACCTTTCATACTGCT
GAAATATAATTTTCCTGGCCACACATCTTCCTCATTAATTGTCTCCAATTCCTTACAAAAGAAAAAAAAAAACCTTCCTA
CATTTTTTTCTATTATAAAATAATTTCATAGTTGTATTTACCAAATGTTTAAGCATGAATGTGGTAACTGGTGAAAACA
GCTTAATCTGTGGTGGCATGAAATGATGAAAAAATAAATATATTTTCTCTTTTTTTTTTCTGTTTTTATTCTCCATCCA
CATCAACTGAAGGGTAGCTAGATGGTTTTGTGCAGAAGTCTGAGTGTCCCTTGTGCCAGGAGATGCTTTTGTTACCTAG
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AGGATGTTGGAGTGCTAAGATCCCTGAATGTGGTACCTGTAGATAAATACAGTGACTTTGAGACGCAGAGCAAAGACTC
CAGTGGAGTCTGTTATTCAGTGAGCAACAGCGTCACCCACCATGGAATAAATCAGGTTGGGGTGGACAATGTATTTCAA
GGTTCTGTGATTAAAGATTGTGGGACACACCAGCGGCCCTTCCATAAATAGATTTCACAAGCCTCAGCCTTCTTATGTT
GGTGGGTGGGGTAGATGGTGGCCAGAGAATGACTGAGATTGGGTTTTCTGTCAACTCGAATGGGAGAGGCTCCTTCAGT
TGGAATTAGATATGTAAAAGGTAAAGAAATGTGTTATTTCATGTACCTGTGGATTGTGAAACAAATTCATGCTCACTAC
ATTTGTTTCAAAAGCATAAATAGGCCCTGCCTTCTGCCTTTATCTACTCTACACGTATAGTATGGAACAGTATGATTAA
GCCAGTATGATTTGAGCCAGAAGATTAAGTTCCATAAAAAGTGAAGAAAAGTCAACAATTTAACACAAGAAATGTTTAC
CGACTAACTATTCTATGCCAGGTCTGGGAGTATGAGGAAATAAATGTGACATATCCCTTGAGAAAGCAGAAATAATCCA
AAGAATTCATACATATACAAATTATTAATTACATCAGTAAAAATCTTTATGATGGGTGTGGCCAGGTCTGGGGCTGGAA
GGCCCACCTCAGCATTGCAAAAGAATTAGTCTTCAGTCCTGAAGCTCACAGAATTTGCTAACCTATTACTTAGGGGGAA
TATACCCCTGAATATCATTACTTGAAGAAAAAATACACATTTCCTTTGGAAGAAAGTAAAATCAGAAATCTTGAGGGTT
CTCTCGAAGAAAATCAGACCTGTAGTTCTAACCAGTCAACTGACCTTAGTTGAGAATGTTAATGTGCCAGAGAAACAAA
TGAATGCTCACCTTTCCGAGGAAGACAGTAGAAAATAACCCGCTTGACTATCTTCAGCTGGAAAAAAGAACTCTTTTTT
TTTTTTTTTCTGTGACGGAGTTTCACTCTTGTTGCCCAGCCTGGAGTGCAATGGCACAATCTCAGCTCACTGCAACCTC
TGCCTCCCGGGTTCAGGCAATTCTCCTGCCTCAGCCTCCCGAGTGGCTGGGATTACAGGCGTGCACCACCACGCCCGGC
TAATTTTTGCATTTTTCAGTAGAGACAGGCTTTCACCATGTTAGTCAGGCTGGTCTCGAACTCCTGACCTCAGATGATC

Fig. 9.18

CACCCACCGCAGCCTCCCAAAATGCTGGGATTACAGGCGTGAGCCACCGTGCCCATTCGAAAAAAGAACTCTTTAATCC
ACTATACCTAACCTTTTACTCTCTCCTTTAGATTTAAATGATTAACTTCTGATAATGCTGCAGACATTTTTTTTTCTGA
AAGATTTGTTAATGAATGGATTCCTTTTGAAAGAAGTCCAGGCAAGAGCACAGAAAAACAGAGAGTTCCAATGATGACC
AACTGTGAAACATACTATGCTATATAAGAATCCTCTAGAGATGTAACTGTAACACCAAGATCAAAGCACAGGGGACTGT
ATCAATGCATTTCCCTGCAGAAGATAGGACTCTATAAAGTGAAGGGCAAGTAGCATGTGGAAGAGGAAGGACACTGGGA
AGAGCCCTAACTGCTGACGGGAGAGCCTAGTCCAGCTCTGGTCCTTCACTGGTCACTGTGAGATCTTAGGCAAATCACT
TGCTTTTCTGGGCCTTCATTTTCTCATCTGGAACTGAGGTAATCGAATTAGACCCTTCTTTAAGTCCTAAGATTCCAAA
ATCTCCAATGCAGGCACATATTAATATTGTACCAGGTAGCCTTTGTCCTACATTGAATTGTAGGTATAGTTTGTGCATA
TTTGTCTCCCATCCAAAAGTCTGCAGATTCACTAAGGAAGTCAGTTAAGGGCCAATCGGGGGATTTGAAGGATTCAGAG
CTACAGGAGCTATTCTTTATTCCTGGGTAACTCTAAGCCAGAAGATGGAGAAGCTCACCTAAAAGCTCTGCCATCAGGT
GTGTGGGTGGTGTTGTACTATGGTGTGGAGAGAGGAGAATGTCTCAGGAGACCAGGTAAGGGTTCCTATGATTGCAGAA
CCAACCAAAGAGCCTTGGAGGCACCAATGATGATGATTTTCTCTAGTTCTTCAAAAGCCAGGAACTGGGCCATATTGTT
TTCTTTGAAAGAAAAGAAAAATAAGTGAAAATGCTTCACAGAATATTTTATAGCAACACACTTCTCTGGATTAATTAAT
AGTTTTAGAAGATGGAGGTAAAGAGCTCATCTGTATAAAGGTCTGAAGATGCACATATCATCTTGGAAAAAAAGAGGCT
GTTATTCCATCATTTCCACATACACGGTTTTGTTACAAATATAATTGAAAATTCAAGTCTTTCAAAAATAGAATACATG
GGTACTGGAGATTAGGTCACACATAATCAAATTCTAAATTTCTTTTCCAGCAAAGTCGTCCCTACTGAGGTCAGAGTAC
AAAGAAGAGGGGATGGTAGGCTAAACGCCAAATGAATGAAAAGGGAAGATTTTTCAGGCAGGGAGTCATTAGTCTTGTC
ACATGCTGCTGATATGAAAGGACTGACCACTGGATTGAGCAACATGAAGGCATGTGACCTCAATACAAGCTTTTTCTGT
GGTTGGAATGAGATAAAAGAGAACAGGGAGAGAAGTGGAGTCACCAAGTGAGGACAACTCTTTGAAGGAGGTTTGTGGA
CCATTTGTTGTTATACAGAGGGAAATGCACAGGGGATTTTATGATGAGGGAACAGCTCTGTTTAAGAACTGGGTGTAAT
TGCTTTTGAGTCCACAGAGAGTCAAGGTTCTCTGTGATTTAATTATTCAGGAAAGAGGCTTCCTAGAAAGTTTACACTT
TCTTCAAAGAAAGTCAGTTTCTCTCATTTGCATGTCTCTCATTTCTAAGTGACTTAATGAAAATTCCTTTCCCCACTAA
CTTGAGTTTTATATACCTTGTATGGAGTAGACATAAGAAGTGCTGGTTGGCCTGNTTTGGTGCAGGACAGGATCCCACA
AAAAGAAATTTCAGCCTTNTAACCTTTCTTCCTTTGACTTTCTGTGATTAGTTTCCTTAGTGTCTGGTAACAGCTCTGG
TTCCTTTGCTGTAGTGTGGTGAGCCTCATCTCTTCAAACAAATTGGTTCACAGGCTGGGGGATGGTGGGCGGGAGGGAT
GAAATCATTGTTTTGCTTCAATGTCGGTTCTCCCCTGAGAGGTCTTTCACAGCAAGGGAGTCTGTATTTTTAGAATTAG
CATGTTCTGTTTCAATGTTGTGAACATTCATTTTAAACCTACTATATTTAGCAGAGGTTTAATTACCCAAATTGGGAAA
CTAGTTTTAAACCGTCACCTTCTACTTGGTTAATCAAAACAGTCCCTACCACCAGCAGGGGAGACTGGCAATTTCAGTC
ATACAGCCACACCTGGTGAGGGCAACTGACAAAAGCAATTCCATTGCCTGAGTTCAGCATCTTCAGCACCCATCCAGCC
CTGTTGTAGCCCCTCTTTCTTTCAGTAAGACTTTCCTGCAATATACCCTCTGTGGACTAGGGCTGGGGGGATGTGTCTG
CTCTGATGTCTGTGGGGAGTGTCTTTTCTTCCCACACAAAAATCGTGATTATATTTTCCAAAATAGCACTCAGGAAACA
ATCTCTCTGTGGCATTTACAGATATGTGAGATGTTGAGGAACTGCGGTCTGAATGATGAAATTTCTTGGATTTTTCAGC
AATGTCATTTTTTCCTTCATTTACTCACTCACTTCTGGAAGGGCCAGTCTGAGAGCTGGGCTGAGGAGTCCAAGGCTGA
TGCAGTCATGGATGAGTCTGAGGCAGGGAGACCACTAGCAGGAGAATGGGCAGTGCCAACTGGCTTTAAAAATACTCAG
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TGACACTAGTTTAGTGAGAGAGATACACAGGAATAGGAAAAAAATTATCATAATAAATGCACAGCTACAGAGCGAGAGC
TCTGAAGGATCATTTTATGAGTATGCGTAACAGGAACCTGATGTGATTGATCAGTGAAGCAAATTGGTGCTTGAACTGA
GATCCACAGTGGTGCTTCCCAAATTTTATGTGCATATGAATATCTGGGGATCTTGTTAAATGCAGATTCCTGTGCTGCT
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AACATAGTCTGCATGGTGCTCTTCTGGTCCCTAACCACTGAAGCAAAGGTCAAGTAATTGTTCTACCTTCTTCCATGAC
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AGTTTGTCCCTGAACCAGGGAGAATTCTTGCTAGCCTGGAACTGCTCATCCCCTTCTCAACAAGACCCTGGATCACTTC
CAACATCAGGAAGAACACACTTCATTTAAAGATGAGTAACAAAAAGGCAACTAGCACAGGATCTATACAAATAANTTAC
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CAAAATAAATGTCTATGAACAATGAATTTAATGAAACAATGAAGAGGCTGGAAGCAGAGCAATTGAGAGATCAGGGGAA
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CCATGGAAATGCAAGCATACTGTAATAAACACTAAGAAGAAACACTGCTGACATCACAGTGAGGAATAGGAGGGCAACA
TTAAGACACATAAACAAAAGATATAAGCAAAATAACCAGAAATGAACAAAGTTAGAGTGAACTAGAGAGAACATGAAAG
ATACAGAAAACAAAAGAATTGCAACATATGCATTATTTGTATCTTTTAAGAAGAAGTCTGGAGATATTACTCAGTAAAA
CTCTTTAGAAATAAAATAAGACTTGAATCTACAAATGGAAAGGGCATACTGTAGCTCAGAAAAAAATTGATACAGAATGA
TCAACATTGAGAGGTATCCAAGTAAACATACTGGCCCTCAAGGCCAATGAAAAATTTTAGAATCCAGGCAAAAATAAAA
AATAAGAGTGAAAAATTAAGTTGGCATGATAACAAAATAGACTATGTAGTGGAATATCAAAAGTAAGAGAAAGGAATCC
TAACATAAATGAGAGTACAACATTTCAACATATTACCATAAAAAGTTTAAATTGTCTAATTCACCTATTGACTCAAATT

Fig. 9.19

TACAAAAAAGGGAAATCAAATTATTTGTAATATGTGAGATGCATCTAAAACAACGAAACTCAGAAAGGATAATAAAGAT
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AGAGGAAAGTTCATAACTTTAAATACTTGTAACAAATAAGAATTAAATGAATTAAGCATCCAATATCAGAATGTATTAA
GTAAAATAAAGACAAGGCAGAATAGAAATTAGTAAAGATAAAAACAGAAATTAATTAATTTGGAAAATTTAAAAAATGC
CAAAATAAAGTCTATGAGTTGTGTTTGAAAAATTTTTAAGTAAAAATGTGTGCTATGCTCTTTTTTTGAAATGATAACT
TTTTAATTGTGGTTAAAAATATAAACCTAAATTTGCTATTTTAGCTATTTAAAAATATACAAATCAATGGCATTAATTA
TATGCAAATGTTGTACAATCATCACCAGTACTGATTTCTGAACTTTTTCATCACCCCAGCAACTCTGTGTCCTCTAAGC
AGTAACTCCCCATTCTCCCTACCCCCTAGCCCCTGGTAACCTTCAGTCTACATTTTGTGTCTATGAAGCCTATTCTAGA
TGTTTCATATAAGTGGAATAATATAATATTTGTCATTTTTTGTTTGGCTTATTTCACTTAGCATGTATCAGAACTTCAT
TCCTTTTTATGTATGAATAATATTCTGTTGTACATAACATACCACATTCTGTTTATACAATTGATTTTGTTATGTGCTC
TTGGATGGTTCTACCTTTTAGCTATTGTGAATAATGGTGCAACACCCATCTTTTTTTTAAAGGGAAAAAGCAGAAATAG
ATGATATAAGAAAACAAGAATTGAGAAATAATTATAGATAGAGAAAATTAAAGGAGATTATAGGACTTATATGTACCAT
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CACCTCATCAAATAGAACTAAATTTATCACATTAGTAAAATATATTTGTCTTACCTCAAAAGCCAGGTCATGTTTAACT
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CCTTTGAATTTTGCACTATTTGTGGTATTATTTCTTTAAAAAGGCAATTTATTTTATTATTTTTTTCAAACCCAGCACA
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CAGGGGATGGCTTGGATTTAGGGGCTTAACCACCTCCATCTTCATCAGCTCCATTCAGCTGAAGCTGTTGCTGTTCTTC
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GGGGTAGGAAAAGTGGGGGAGTGGGGAGATGGAGGTCAAAGGGTATAAAGTTTCATTTATGTAGAATAAATAAGCCTAG
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GGTAATCATGTCATTATGCATATTGTTAAATAAAATTTATGGAAGCTCTCATTCTAGATCCCAACAAACCAAAGCAAAA
TGGAGTCCCACACGCTAAGTGCCACATGATTAAACTGAAATTTTAAGAAAGCAGGTAAATTTCCAAACAGACCAGATAT
TTTTGAAAACAGAAGATTCACAGAAACCAATTAGAAAGGGCCCAGTCAGCCTAAGTCAGTATAATAAGGAAATCTCCAC
AGTTTTAACCCTTATAAGAAAAGTAACCTGAAGTAATCTGATGTTAACCGATCTGCCTTTTTCTATTATTCTGTTTCCT
TGTTCCCACTTTACAAAAACCAATTGTTCTGCCATGCCCAGTGGAGCATTCATTCTATTTATAGAATACAATACTGCTG
AATTCTAGAATCACAAATAGAAGCCAATTAGATCTTAAAACTAAATTTGTTATAGTTTTGCCTTTTGACAATATGTATA
TCAAAACATCGTGTTAGGTATTGTCTTAGTCTGTTTTCTGTTGCTATAACAGAATACCACAAACGGCAATTTATACAGA
AAGAAGTTTATTTGGCTTACAGTTCTGGAGGCTGGGAAGTCCGAGAGCATGGTGCCACCATCTGGTGAGGGTCCTTCAT

Fig. 9.20

AGTGAAAGGGTGGAAGGTGGAAGTGAACACTAGAAACAGAGAGCAAATGGAGGCTGAACTTATCCTTTTATCAGGAACC
CACTCATGGGGCTCTGCCCTCGTGATCTAATCACCTCTTAAAGGGCCCACCTCCCAATACCATTACATTAGCAATTAAA
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TGCCATCAGTTCTTTGAAATGAAACTCTAAGCTGGGAAGAACTCTCTGCTTAGGGGAAGTAGGACTAAAACTTGACTTT
TGATTTGGAGAACATTCAAAAGACTCTAAGCTCATGAGTGCTCAACTTGTAATTTTTTGCCCTTGAAAAAACTATAGGC
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GCCTGGGCAACATGGCGAAACCCCGTCTCCACTAAAAATACAAAAATTAGCCAGGTGTGGTGATGCATTCCTGCATGCC
AGCTACTCGGGAGGCTCAGGTGAGGGGATTGATTGAGGCTGGGAGATTGAGGCTACAGTGATCCGTGATGGCACCACTG
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GCATACAGCAGCAAGAATGCTTTTCCTAAAAATTCTTTTTGCTGAAGTCCCTTTTTTGCTTATGTCTCTTTTCCTAAAA
AATCTTTTTGCTTAAGTCCCTTTGTTGCTGCCCACATCATTTGATTTCCCACAGCAAATTATTATAAGCCTGCATTATC
CTGTTTCTCCTCCTCCTCTGAATCTTCCTCTCCATCAGCACGATTTCTGTTTTCTTTCTTTGCCAACTAGCTGTGTGGC
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CCAGGACTACAGGCGCCTGCCCCCACTCCGGGCTAATTTTTTTTTTTTTTTTTGTATTTTTACTAGAGGCGGGGTTTC
ACCGTGTTAGCCAGGATGGTCTCAATCTCCTGACCTCGTGATCTGCCCGCCTCAGCCTCCCAAAGTGCTGGGATTACAG
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CTGAGCTAGACACAGAGTGCTGATTGGTATGTTTACAAACCTTGAGCTAGATACAGAGTGCTGATTGGTGTATTTACAA
TCCCTTAGCTAGACATAAAGATTCTCCAAGTACCCACCAGACTCAGGAGCCCAGCTGGCTTCACCCAGTGGATCCCGCA
CGGGGGCCGCAGGTGGAGCTGCCTGCCAGTCCTGCGCTGTGTGCCCGCACACCTCAGCCTTTGGGCGGTCGATGGGACT
GGGCGCCATGTAGCAGGGAGTGGCGCTCCTCGTGGAGGCTCCGGCGCGCAGGAGCCCATGGCAGGGGCGGGCGGGCGGG
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GAGAAATTGAGCACAGCAGCTGCTGGCCCAGGTGCTAAACCCCTCACTTCCTGGGCCTTGTGGCAGAGCCTGCTGAGC
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AGGGCTGCAAGGGCTGCCAGCACGCTGTCACCTCTCAATACGATCTGTGAACATGTGCCCTTTCTCAGTTCAGAAAGCC
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TGGACCACTGCATGCAGCTTGGGAGCCTCCCTGTCTTTAAGGTATCGGACAAAATATAGATGAGAGTAGCAAGGCATTA
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GCTCTTCAACATCCCATAACCTATGCATTTAGTTGCTGTTCATAAATAGTCACCTGCATATGTTCATCTTGCTTTTACC
TGTGTTCATCCCATCTTTTTTGTGAAACTCCTGGAAGGCAGGTCGTGTCTTCTTTCATTCTTTTATACCATCTCAGAGG
GCTGTAACAATACATGCTCAGAAAACATTTCTGTTCAACCTGCATGAAGTACAAGGCAGGCTGAAATGTAAAGAAATAC
ATAAATTACACTGAGGAAGAGCAAATCCTTTCATATAACTTTTTCCTGGCATTACCTCTTAGGGGAAAAGAATTCTCAA
GCAAGCTGTAACTGAGCTGGTTACCAAAATCAGAATGAATTCTCCCCAATCACGGGGGACATTCCATAAGCCTTTGGAG
TGAGGTCTATTTTAAGGATTTTGTTCAAGTTCCTCCTTCTTGTTTCCTGGCCACACTGCCCAGCACTTCAATTGGCTAA

Fig. 9.21

TAGGGATTCTGAATAAGAAAGATACAGGCAGCTCACTTGGAAGTTACGTTAAGGACTAATAAAGATCTTGGAGTGATTT
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GCCTCCTGCTTAAATGTCAATTGAGGCAACAGATTAATTCCCCTTAAATAGTGGCCTGTCATGTCTTGTTACTTAGTTC
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GGTCAGTGTCTCACTGTAGCATCACTAACACCTTTTATGGAATCAAGTGATTAATAAATGTGTCCTCATGAGACTGTGA
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TAGAAAATTTTGACTATTTCTTCTTTTAGCTCCCTTTTTACGGTCCACCATTTTTGGAAGATGACTTTCTCCCTGTCTT
CTTAGAATAAAAGGTCCAAAGGAAGAAAAGAACAAGATATGCTCAGGAGTTACCTGTGATGACTTCCTCTCCCTTGCCT
CGGGCACTGGCCCACCACTCCTTTTTCTATTCTCAGTTCTTTATCTATTTACTTTTCTATTCCCTGCTCCTTTCCTATT
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GGCCTGCTTGCCAGGTTAGCCTTTGGTTGGTAACTGGGAACTGAGCCCTTGGAGGGCTCTCAGTCAACAGTCAATTGAT
AAGTGTGGTTCACTGTGCCTAGACTTTTGTGCAAACAACACAGTTTATGCTTGAACACCTGCTCCCCTGTTTGGAGTCT
GGAATATTTTGATGTGCTAGGCAGAGGGTGCCTATGTGATCAGCTCCATGAAAAACCTTGGGCACCGAGTTTCTAAAAA
GAAGCTTCTGTGGGCTGAAACGTCATATACAAGTTGCTACATTTTCCTTGCTGTACTCTATGTGATCTCCCGTGGTAGG
CAGAAGCATAAGGAAATCTGCACGTAAAATCATTCAGACNCTGCCTGTGGCTCTCCCTTATGATCTGGCTGTGTATCCT
TATTACATCACTAGAATAAATCTTAGCTTTAAGTACTGCCATACACTGAGTCCCATGGGTCCTTCTAGTGATGTCCAAA
TGTAGGGGGCAGGGGTCTTGGGTACCCCTGACACAGTATCTCTTTCAAAACAAATTCTTAGAGTAGGTTCTTAATAAAT
ATTTTGTGATTGAGCATCTCAAATCTCCCAAACATTGTAGATGCTTAAAACATTTAAACACTTTTGTTTCTTTTTACCA
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ACTCACATGCACACATTTCCAATCAGATATGGTGAATACTAGTGGTGGAAGGTTAGGAGCCCAGAGGACAGCATCTCAT
CCACTGGGACCTTGCTTCCTACGAGGCTTGTCCTGCATTTCATGGCCTTAAATTTCACCAATGTAGTTATCTAGTGGTG
CTGATAAATCACTTATAATTAGTTTTTTATTGTCTAAGTATCAATTTTAGCTGCTGTTTTTTTAACCTTTCTTTAGTTT
CTGCCTACATAATTTCCTTAGAATTAAAGCATCAATAATGGACCTTTGCAAAAATAAGCACTTTCTAACACCAATGTGC
CATCCATCAGCAAAGGAGGCCATTAGCAAAGTCCAATTCATAGACTGCCTCTGATTTTGCATTTTAAACTTGCTAATAT
TTAGCTCACAGTGTGATTTTCCCACGGTCACACACCTAGTTGGTGGTGAATTGCCGTAATTTTGCAATTCATATTATTT
TGCATGTATCTCATTTTATTTGTATTCTGTGCCAATCTCTCTGATATTGAATGTAAGTTTATTGAGTGCAGATGTCTGT
GTTTTTATTTTTGTGTCCCTAGTGCCCAACATATNGTCTAGGGAGGAAAATACTTGTTAGATAAACAATTAGATGATCT
ATTAGGATTCTGTAGAGAAACAAAACCAATAGGAAATATATAGATACATAAGAGGAGATATATTGTGGAAATTGGCTCA
TGCAATTATGGAGGTTGAAAAGTCTCACAATATGTCATCTTGAAGCTGGAGAACCAGGAAAGCCAGTGGTATAATTCAG
TCTGAGTCCAAAGGTCTGAGAACCAGGGGAGCCAATGGCATAACTTCCAGTCTGATGCCAAAAGGCCTGAGAAACTTCA
GGGGAGAATCTGAAGTCCCAAGAACTAGNAACTCCAATGTCAGAGCAGGAGAAGATGGATGTCCCAGCTCAAGGAAAGA
GAGTTCACCTTCTTCTGCCTTATTGTTGTATCTAAACTGTCAATAAATTGGATGATGCTGGCTCACATTTGTGAGGGCA
GATTTTCTTTATTTAGTCTACTGATTCAAATGCTAATTTCCCCCAGAAACACCCTGAGAGACACATCCAGAAATAATAT
TTTACCAGCTATCTGAGCATCCCTAAGCCCAACCAAGTTGACACATAAAATTAATAATCACTGATGATAGTAATGAAAA
GAAAAAACTTGGATTTCTGCTTTTTGGTCTTCATGAGATATTTTCCTCACTGTATCTCTCTTCATGAGATATTTTNCAC
TATATCACATGGATATATTTTCCACTTCGATATAGTAGAAAATATGCATGGAAAAATGCATCTATTATTTATTGAGCAC
ATATTATACTTGAGGCACTCTGCTAGGCACTGTATTGAACAAAGATGATTAAGACAGTGTACCTTTCCTAAGGCACAGA
AACCATAAGATAAATATACAAATGACTGTAGTGCAAGGTAGAATATACAAATGCACAACTAAGCAAATCTGAGAATGGG
GCTTTCACACATTGTGGGAGAATGAGAGAAAGCTTCATGGAGGAGGTAACTTTTGACCTAAACCTTGGAGCAGGAGCAC
CTGAGTTCCAGAGGTTAATTAAAAAAATGAAGGCAGAGGGAGAGAGGGCAGGGTGGGCAAAGGGAAAAACAGGAAATAT
AAATGTGAGTCATTTTTGGAAAACTGTGGGAAGTCTCTTTTAGGTGTGGTGTATGAAGTGTGTGTATGTTGGGGGAATA
GAGCAAAGTAAGGATTAAAAGTCAGGTTTCCAGGCTATGTTGCCTGGCCAAGCTCAGGGCTTTGCACTTGGTTCATCAG
CATTGATATGTTTTTTGTTTTGTTTTGTTTTTTTGACAGCGTCTCGCTCCGTCACCAGTCTGGAGTGCAGTAGTGCAAT
CTCGGCTCACTGCAACCTCTGCCTCCGGGTTCAAGCAATTCTCCTGCCTCAGCCTGCCAAGTAGCTGGGACTACAGGTG

Fig. 9.22

TGTGCCACCCCGCCCAGCTAATTTTTGTATTTTTAGTAGAGGCTGGGCTTCACCACGTTGGCCAGGATGGTCTCGATCT
CTTGACCTTGTGATCCGCCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCTCCCGGCAGCACTT
ATGGGTTTTAAATATGAGAGTGACAACATCAGGTTATTGGGCAGCAGGAGGTGGGCCAGTTTTGAAAGGCAGGTGAATG
AGGCAGTGAGATAAGTTGGGAGGGGCTGCAATAGTTCAGAAACAAGGTAGTGTGCAAGTAAATCACAGGTGGCACCAGA
GATGAAGAGGAAGAGGCAGTGTGACAGCTCTGTTGCATGACACAACATGGGAAACGCAGGATTGAGAAGAGCCAGAGGT
GATGATGCCATTAGCAGCGTGCATTTAGTACTTATCACAACCTATTTACATTTTCTATATAAACATTGATCTCATTAGA
CTGTGATCTCCTAGAGGAACAAGTCCCATGTCATTCTCATTGACAAAATGAACATGGCAGATACTTGGTAAATGTTTGC
TAGTAAGTGAATGGAAGTCAGGCGAGTTGGCTTGGTGATGGCAGCTGGGGTGTTGATGGAAATACCGTGCTTCTTTTTG
GACATGATGGAATTTGGGGATGTGGTCTATTTGTTAGATGCAGTTTCTAGGAAGAGATTACCCAAAGAACTGAAGAACA
ATGACAAACTTATGTGTATGTGAGGGCAAGATAAAGAGTAGAGAGATGGTATAGTTGGGTATGGAGAGAATGCTGTAAC
TGAACTGCTCCCTTCAAGATGTCAGGTAAGATTGGAGAGAAAATGCAGGATAGCATTTGTCACAGGTAGTTGGAATGTG
GAGGGAAGACTGGAAGGATGAGAAGGACTGAGGTGGACCTGTGGGCTGTGTTAGCCGGTGAAAGTTGGAGGGAAAGGGA
AATGGGAGGCAGTAGAGCATGGAGTTACATATGCAGGCACTGGAGTCAGGCTGTTGGAGTTCAAAGGCTAGCTCTTCTG
TGGATTTGTTATGTGACTTTACACGCTCTCTCTTGCCTCAAGTTCCTCTTCTGCAAAATGAGGTTAATAATAATACCTG
CATAAACACATGCACAGCACACAGAACAGAAGCTGGAATGTGATAAGCACTTCATAAGCATTAATTCTTCTTACTGAAA
CTCACTAGGGTCACTTTGTGCATATTATCCTATTTAATCCTTAGTAACTGTATAGGTAGGTGTTATTATCTTCATTCTG
CAAATGAGAAAACTGAAGTGCAAAGAAGTTTCATAATTTTCCTCAATCCACACAGCCACTATATGATGTGATAAAGCTT
ACCTAAGCTAGAGTCTTACCTGATCCATCTGGTGCCCGGGCTAGTGCACTTTCTCCTATAACACTCAGCCTAAGCTAGG
TAGATATGGCAAGACCACTGGCTGAGGCAACTCAGATGTGATCAATAGGTAGTAGGGAACTGTGGCTGACTTGGGGGCA
GGGGAAGCAGCATGCTGGAAAGATTCATCTGGTATGTTTATAGAAGAGAGCAGGCAGCAGGCATGGGGGGCTGATGATT
CAGACCAGAAATGGCTGAGGAAATGGTGAGGTCTGGCAAATGTCAGAGGAGCTGTGATAGAAGAATGAGCAGAATTTAT
GACTGATGCAAATAAGGTAGATATGATGGTACGTGACAGAAACTGACTAAGAAGTCTGTATGCAGTGGGTGCAGCTTAG
AGTTTCAACTTGAAAGTTTCAAACCTGGGACTCTAAGAAAATAGTCTGAATGGTAATGAGAAAGTTGTCACTTTAGTAT
CTGCTTCCCTTGAAGAAAAGCACCTTTAGAGGAACCAACTTGGAGAATAGTGTCGCATCAAAGTGGGACACTTCATTAT
TTTTAGTGGCAGCATGGTTCTGATGAGCACACCGTCGGTAACCTTTACTTCACTGTCAGTCCAGCTCTGTCAATCCTCC
TTTATTAAGGAAGGAAGCTGATGGATCTTTCCTTTCTTTCTTTCTTTCTTTCTTCCCTGGAGTAGGATGTTTTCTGTAC
ACAGTTAGCATGTGAACTTCTTTTTAAAAAGAAGTTTACATTTTACTCTAATTCTCATCCATAACGGAGTGTGGTGATT
TGCATTTGGGCAGTTAGGAAAATCAGTTCTGTTGACTTCCTGTTTTCTATTTCTGGCCTCGAGCAGAACTTCCCATTTG
AGTGGGACCAAGAAGAGCATACAAAGCTGAAATGTTCTCCAGAAGTTGATTTCCAATGGGGATAAAGTAAGTTAATGGT
CTGAGGTGTTTGTCTCCCCTTGCCCCCGAAGCTTGCCCTTTAGTTGCTCTTGTTTTTAAACTACAGGGAATGAACTGAG
GGAAGCATTTTTTTTTTTTTTTCCTGCAGGTCAGAGTCCCAAAGCTTTAGTGCAGGGTTCCAAGGACTCAGGAGTTCA
AAACATGCTGCTTAGGCTGAGCTCTTGGCCAGATTTGGAGATTCCAATGTCTTCTCCCTTTGACAGTTCCTAAGAATAT
TTTATTTGGATCCTTTTCTTTAGGTTTTTCTGTCTAAACATTTTATTTTACCTAGTGTGAAGGGGTGAGGGAGGGCAGA
TTGTTTCCTTTCTTCCTCCTCTCCCCTTCCCCCTCCCCTCTCCCTTATTCTCTGTTTATAATTTAAAAGGATGCTCACT
TTCATTTTCTCATTTGCTTCCTTCACAGCACCCTGTGAAGCTGATATTGTTATCCCCCTTTGACAGAAGGGGAAACTGC
AGTTTCAGTGAATTTCAGTGACTTAGTCAAGTCACTCAGTTAACAGTGCTGAGAGTGAAGCCCTAGTGTTCTGCCTTTA
GATCTCTTTTTCCCAGTACCATACTGCTTTTCTGGTGGAGGTTGTAGTATATAGGATGATGTCAGAAAGGAGAGGCTGG
GAAGCCTGAAACGATCACATCGACAATTGAATTGTCTGTTTTTTCTAATAAAATAGAAAATGTTAACTAAATATATTGC
CATGCAATTCTTCAAGCATATAGGACTTTGGGTCCTTTTTTGTGTCTCAGACTTTAAGATGATGTCTCCTGGGGAGTCA
TTTACTATATGCAAGGAGAATAGCTGAAAAGTCAGGGTAGGCCAGCAGTATTTCATGCTTTGTACTTGGGCAATATGGG
TTTTTCTGTTGGAGGTTCAGCAGAGGATGGTAGCAAAGTGACATTTAATTCTCCTGCTTGCCAAATCTTGGTGAGGCCA
AAGTGGGTGGGGGAATCGGTTGTGAGTAGGTGTTAATGACGAGTGTCTGGACCTTGACGTCTTCTCAGTCCTGGAGTAG
GGAAAAAGGAACAGAATTAGTGCTGTTTAGAAGAAGCTGGTGATGGAGGTCTGCTTAGGAATGAGTGCAGATTAGGACA
GGGGCAGTGAGGGAGGCCCACAGAGACTCTGGCTGCCTGTCTTTCCTGGCATGTCTGTGGAATGACCTTGCTCTGCCAG
GACTCTGGAGGAAGCCTTTGATTTTGGGGGAATCTTTAGGACTATGCACATAACCAGACTTTCCTGATGGGAATCTCC
AAGGGGGCCTCCTGGGCCAGGGCCGTGGGCCAGCAGGTGTCTTCCTAACATGGTCTGTGAATAGTGCCCAACCTAGGCG
GTGCCTTCTTTTCCTGAATCAAGCCCTTTCCTCCTCAGTGCCAAAGCAGAAGTGGCTGGGTGGGTGAAGATCTGAGTGC
TGGCCCGGGGCCACAAGCCATGGGCCACTACCCATATTGCTGTGAGATCCTGACCTTTCTCTTTTCTGGACTCACAAGA
TAAAGAGAGTGAATGAGGAGGAAAATCAAATATTGTGGCAGGGAGGGGCTGACAAACACAGGCATGGCCAACAGAAGTC
TCCCACCAAAGTGAGGAGCTGAGAGAAGGATTTGGGGAGGGAATGTCAGAAGTCTCACTCCCAGGCAAAGGATTCAACA
AAGGAAAATCCGACTCTGGCTTGAATATGGTCCAGGTGTGGGGTTAGTAGTCCATGTTACTGTCTGACATGGGAGAGCA
TTCCACTGTGATGGAAATGGGGTGGGTTGGGGTACAGGAGGAACCATAGAGGTAGAAGAGAAAGGAGGTGAGAAGGAAC
ATAGTCTGGCAGTTGACCAGAGTGTATCTGGCTGTATGGTGTAGTCCCCATAACAGGGCACCTATGTCTGTACATTGCA
CAAAAACAACCATCCAGTGTGTTCTTAAAAGTCCTGTGAAGGTACATTGTAATTTGAACTATATTTTGAAGATATCAGA
GGATCCTATCATTTAGAAGAATCTCATGGGAATTACTTTTAAAAAGAAAATAATCATTTTAGGGAATAGAAAGTCTCT
CAACGATTGGTTTTGAATCTCTGGGTTTTAAATCCATTTACTCCAAGTAGGATTCAGTATTTCACTCTTTCACTGGCAG
TGGATTGTTTTTTCTCCTACATATATGGCTTGAAAGCTCTTAACAAAGGATAGTAATTAATTATTTCCCAGCTATTTTT
ACCTTTGACGTATTAAAAGTTGGAGGAAACTATTTCATTTAACAGAATTTAAACAAAATGAAAAAGTTATTTTCCTTAA
GGTATTCTGCTGTGCTTTTTCAAGGAAAAGCCTCCTCCAAAGGCACTTTTGGAGACAGTTACCAAAGGAAAATCCCACC
CACCAACAGAGACACTCAGCCTCTAAGTTTGGCTTTTGGAAAATGAACACTATTCTTTTTTTTCCAAACAGGACGCTGT
GAGATCAGTCATGTACACTATGAAAATAATTGGTGTGCATTAGTACACCTTGTGCCAGATTTCATGCTTGTTGAAAGGT

Fig. 9.23

GATTGGATTCAAACCAGCACATTTAAAGGTCAACTGGTTGTTCTTAAACTGTGCAGAATTTTAACTCTTTCATTATAAT
GGATTTTAACCAAATGGCCATTTTAGGAAGGAGAGAGACTGCATACTGTGTTTTAACTTTCTGACCTTTTTGTTCTTAA
ATTTTTTGTAAAGTTCTCAGGGATTTCCTATGGATGGAAAGGGTCTGAGAAATCAGTTCTCAGCTGGCATTTGGAAAAG
GGTGGAAGTAGAAACTGAGTTCTTTTTAAACTGCTAAATTTAGGTCAGGGCTTTAATACGACTGTGCACATCACATAAG
CAATGTCTAAATGTCAGGCTGAATGTTCTCTCTCTTTTAAATAAGTACTTCAAGTTCGTTAGTAATAGCTAGCCCTCTG
TCTCTTTCTTGCTTCTCCTCTCACCTTTGAGCAACTTTTTAAGTTCCTTTAACAGCTCTGTGGAGAAACCACCATGTAA
TGATCAATATTTAACCCAGNTGGTTGACGTTAGCCCCGTTTCTGGAATGGGTATTTCACTGGCTTTGGGGTTTTGATG
ACGTTTTCTCCCCAGTGACTGTGGATGCATGGATTAAATTTGTTGGTCTGCAAAATACCATCTGTCTACCAGCCATTTT
GCTGTATTTCCCAAAATAAGGTAGGAGACTGATGTGTCTCAAATAAGCAGGGTGAAATTTAGTCATCTGATGATAGTTT
CTTGGGTTGTGCATTAGTGTCCTGATGAGCCCCTAGCAACTTTCAACATTATGAAGACTAGTTTGGAAGCCTCAAAGGC
AGTATCTTTCTTGAAGAAAAAAAAAATAACACCAGGCATTTCCACAAATACCATACACAAGTGGTCAGGTAAAGGCTGTG
GGAGTTCACGCATCTGTTTACCTTGAGTGTGTGTATGAACTCTTGTAGTTCTAACTAAAGGCAAATGGAAACTGTATAG
AGTCCCATTTTGTCAAGCTGACAATTCAGTATCCTCTTCTTTCCTGGTTGCTTTATAGCCCACTCTTAGTTGTTNTCTT
TCTATATTTCCTACAATTTTTAGCTGTGAGGCTGTGTATTCGTTGCTTAAAAATTCTGTGCCTCATCTGCTTCACTTGC
AAAATGGGGAAAATGTCACAGGATCCTTGGGGTGTTGCTTTGCCAGCCAGAAACCTTTGTGGCTAATGGTGCCTTTGCC
TGAGTTTTGCTCGGGCCCACTGGGCTGGTTCTGCCCACTCAGCCTGGGCAGGCTGTGCTGGGCTCACGCTACTGGCCCA
GATCTTATGCCTGCCAAGGGTGAGCCAGGCACAAAAAGGCAAGGGGTATGTGAACAAGGGAGCTGCCCATTGTGCACAG
CCAGTCATGCCAGCTGNAGCAGGGCAGGCAGCTCCAGATGCCGACACAAGTGCTAGCTCCCTGTGAGGCTGTGGCTGGA
CCAGGTGTACCACAGATGGCTTCCACTGCTGGCACCCGGGAATGTGGTGGTGCCTGGAAGCTTGGAGACGCCAGGAACT
ACAGAGCCCCAAAGAGGGTGTCACATCCCTGGCTTGGGGAGCTCCCAGGTCTGGGCTCCCTGAAGGGCTGCAGTTCCTC
TCTTCTTCTCTCTTCTCTCCCTCTTCTCACCTGCAACATGGCAAGCAAGGGGTGTGTTTCAGCCCTGTTTGTGTTACAG
CTCTTTCAGTCCCACCATTTAGTGGGTCCCAAGTTCTTGTCCTGTGTCCTGGAAGAATGAGGTACAGGGACAACTGGAG
GGTGAGCAAGGCAGAGAGGAACTTTATTGAGCGACGGTACAGCTCCCAGGAGACCTGAAGTGGGTAGCTCCTCTCTGCA
GGCAGGTTGTCCTGTCAAGCCTGCAGCTCTCAAGAGAGAGGAGACCCACAGTGGGTAGCTCCTCTCTGCAGGCAGGTCA
TCCCTTCAAATGTGCAGCTCTCAGGAGAGAGAAGACCTACAGTGGGTAGCTCCTCTCTGCAGGCCAGTTGTTCCAACCT
CTGCCCAGTCTGGCTGAGTCCAGGGAGTTTTATGGGCTTCAGAGAAGGGGAAGTGAGTGCTAATTGGTCTATGGACAGC
TGTGGGCAGCGTAAGTTCTCACTCCAGTCTGTGGAACTAGCAGCCTGGCCCCCAGGCTTCAGGCCATCCCAGGCCTAAC
GGTGGGGCTTCACGGAAACTGCCCCTTTCTGTCCAGGAGTCCGTCTGCCTCCCGCTGCCATCAACCTGCTGCACTGGCA
CCCAGGCTGTTCATGCCAAGGGGCACCTGCAGCCCATACTGAGCCACTCTCAGCTCCCCCTTGGCCCCCCTCCCATGCT
CCTTGGTGCACAGAGTCTGGAGGGGGCCGAGGCAACAGGGGGCTGGTGTGTCAGTGGTACTCTGAGCACGGGCATACAC
AGCTGGGTCGTGACAGTGCCCCAGCTTGCACTTAACTTTGCTCTGAAATTGGAGTGGGAGCTAGGAGTGGGGAGAGGCT
GGGCAGTGGGAGCAGGCATTTCTGAGCCTGTGGGGGTAGGGGGGTTTCCTGGGCTTCTGAGAGTACAGGGATGCCTGGG
TCTGCACCCACAGCTGGGTGGCTGCAGCTGTGCCCAGGAGGGCAGGACTCCCACCCCTCACACTCAGAAGTGGGTGGGG
CTTCTGCCTGTTCCCAGCTCCCAACAGCTCCATGGAATGTGCAGCCCTGGCTGCGCCTTGCCTGCTGCAGCTGGCGTCT
TCTCAGCAGCCACTCCAGATGGGCCACCACTGTCATCAATTACATTACCTACCTTAGTGTTATTGTGAAAATTAAATGA
GTTAATCCATGTAAAATGCTGGGAACAATGTCTGGCATAACATAGAAGCTCAATAAATATTAATTCTCATTATTGTTGG
TATCATTTTTGCTATAATTTGAATCTTTTACATATTGTTGTGACATATGGAGGTTTTTGACCTACAGGGTTTCTTCTGA
GTGGCATAGCTCAGGGTAAAGTGGCTCTCCTCACCTCTCAATACCCTACTGTCTTTTGCCTAAATTCCAGTTAAGGATG
GCTAGAGACATCATATGGGAAAGGGTGGTCCTGAACCAGAGAGATGGGAGAGCAAATTGCTAAGGTGGTTCTTGAGGGT
AGGGATGGAGAGCCAGACAGAGACAGGTGTCCTCCAGACAGCTGTCCTTTATCATTCACTCACTGCCTCTGCAGCTCCT
GCTGCCTCCTTCAGAAAGCGAATGTATGTTGCCTCTAATGCCCTTCCTGAGCTAAAGCCCAGTAGTTCTCAAACATCCT
CTTTCAAAGACACTGAGCCCTGGTAACCTTCATTACATTGTTGTTCTCATATTTTTCTCAAGTTAACTCACTCATAACC
TACAGTTTCTTATTACATTGATATATTGATTATGAATCTTTCACCATTAACTTTTGTTCATTTCTATTCCATCGCAAAC
TTAATATTCACAAAACAGGCTTAATCTGAGCACAAGTGAAATGGTATAGCTGCGAAATACCTGGCAGTGGTAGGTACTA
GGTGTTATAACATGATGACACTTAGAATTTATAGACACTTAGAGCATAGTTTTTCAAATATTTTGGCTGTAATCAATAA
GAGATAGATTTCACATCACAGTCTATACAGATGTACATTTATTTATATGTATGTATGTAGGCATAGCTTAAGCAAAAGT
GTCATGAAACAATGTTCAACCTATTGCACACAATGTACTTTCATGATTTGTATTCTCTTCTTTTTTATTGAAAATGAGT
CTGGTTTGTAACCCAGTAAACACATAACCTACAGTTTGAAAAACCCTGATCTAGAGGAACATCCAGTGGGTGCCTCTTG
AGTTCTTACGCACTATCCACATATCATCCGTATCATACATAATGGGTTGTGGCCATCTCAGTTTTATTTTGAGGCACTG
CCTCTTCTCATCCTGACAGAAAAAAAAAAAAAAAAAAAAGAAAAAGAAAAGGAAAGAAAGCTCAGATCAAGAACTAACACC
TTATCTTAAAACATATAATCTCTCCTTTACCTTATGCTCTTTCCTAATAACTATTCTTTTTCGATTGTCCAAAAGAAAC
CACTCTAATAACTTATAACACCATGTATTAGAAATTTAGAAACCATTTTTGAAAGACAGTAAAGATGTAAATTAATGGG
GGGACTAAATTATGCATGGATAGAAAGACTATTTATTATAATGACATCAGTTCTCCCATAAAATCAATGATATTTCAAT
AAAAGGGTCAACAGTCTTTATTTTATAATGGAGACTCACAATCTTATTCCAAAATTTATATGGAAATGCAAGTAGCCAA
GAAGAGGCAATATAGCCCTAAAGTAAAAGAACACGGAGGAAAAACTTAAAACTATCTGATATCAATACTTACTATAAAG
TACAATACTTAAGTGTGGTACTGACACAAAGAAAAATGGTTCACTGCAGTGATCATATACATCTTTTGTTAGATGTATT
TGTATGTATTTGATATTTTTGATGCTGTTGCAAATTTTATTGTTTTGTAATTTTTACCCTGTTGCAAGTATCAGAAATA
CAGTTGATTTTTCTATCCAGCAAACTTGCTAAACTTTGTGGTTAATGGAAACACTTCAGCTATAGATTCTTTTCAATAA
CACAATCACATTGTCTAAGAATATTTTTATTTTGCTTATTCTTTTTCAATCCTATGCCTTTTCTTGTTTTCCCCCCCTT
GCTTTATTGCTTTGGCTGAGATTTCCAGTGTCAAATAGAAATGTTGATGGTAAGCATTTTTTTCTCATTCCTGATTTCA
GAAGAAAAGCTTGTAGCATTTCAATATTGAGTTATTTTTTTTGTGGTGTTAACAATTTTTTTGTAAACACCTTTTATT

Fig. 9.24

ACATTTAAAGAGTTTTCTTCTGTTTCTAGTTTGCTAAGAGTTTTCTTGTTAGACGTTAAATTTTATCAAATGGCATTTC
TGAATCTGTTGATATAATAGAAATTTCTCCCTCATTCTGTTAATCTGGTTAACTATATTAAATTGATATTTTGAATGTT
AAACCAACTGTATTAGTCTCCAACCTTGTAGTAACTAAACTGAATTTAGTTACACTGTGTTTCATTACTGGATTCAGGT
GGTTAACATTTAAGATTTTGCACTGTCACATGTAAGAGAGTTCTGGCTTGACTTTTCTTTTCTTTTAATAACTTTGTTG
GGTTTTGGTGTAAAGGATATGCTGACTTCATAATACAAGTTGGGAGTGGTTCCTGTTTTTCTCTTCTCTGTAGAGTTTA
TGTAAGATTACTGTTAATTCTTCCTTATCTGTTTGGCAGAATTCAACAGTGAATCGTCCATTTCATATAAACAAGTTTA
TTTGCTTAAGGTTACTCAGAATATAATTTTAATATATCTGAAGGATCTTCAGTTAATGTCCCTTTTTCATTTCAGATAT
TGGATATTTGTACCTTTTGTTATTTCCTCCTTTATCAGTCAGTCTCACTAGGGGCTTATCAGTTTTATTAGTCATTTCA
AAGAACCATCTGTTGGCTTTTTATTGATATTCTTTATTGTATGTTTTTAAAATTTTCATTGATTTCTATTCTTATATTA
TCATTTCATTTCTTCTTTTTCTTTGGACTTAATTTGCTGTTCTTATATAATTATAATTATATAATTTATTGAAATATAT
GTTAAGATAATTGATTTTTAGGCTTTATTCTCACTTAATATTTACATTTAAGACTATACATCTCCCTCAAAGGCTGGAT
TTAGCTATATGGCACAAATTTTCTACTGTAGGATTTTCACTTTTATTCAGTTCAAAATGTTTTCCAATATCTGTTTTGA
TTTCTTCTTTGAGCTACATGTTCTTTATAAATATATTACCTAATTTCTAAATATATGGGGATTTTCCAGTTGTCTTTTT
GTTATTGATATCTAGTTTAATTCCACTTTGGTCACTTTAAGAGAATTTGAATTCTGCCATTACTAGGGCTGTGTTCTAT
ATATGTTGAAGTTTTAAAATCATGTTGTTCCCATTTTCTCTATAACTGGTGACTATTTTCCCACTTATTAGTCTGTTAC
AAGAGGTGTGTTAAAATGTCTTATGATTTGTGGGATTATCAGTTTTTGTAATTCTGTTCATTTTTGCTTTAAATAATTT
AAGCCTCTGTTATTAGGAGCATATACTTTTAAAATTATTATATCTTCCTAGTAAATTCAGCCATGTATTTCCTCCTCTT
TATCTATTAATGTTTTGTCTTAAAATCTACTTTGTATGGTGTGAACATGGCTACTTCAGCTTTATTCTGGGGTAGTGCC
TGCATAGCGACCTCTTTCTATTCTTTTCACCTTCAATCTTATATATTTAAGAAATGTCTCTTGTAAGAAACATATAGCT
TTGTTTAATACAGCCTGGCAAATTTCGTCTTTTGAATAAAATCTTAATGTTTGTGATTTATGTAATTATTATATTTGTG
TTTTGTTTAAATCTATCATTATTATTTGCTCTCCATTTGTCTCATCTTTTGTTTCCCCTTTTTTAAAATCTTTTTTACT
TTCTTTGTCTTGAGGTTTAGAAAATTTATTATTATTTTCCACTTTTCCTGCTCTGTTGACTTCCACCACTCCCAACTTA
TACACTTCTGTTTATGTGTTTTCATTTGGCATCAATATTAACCCCCTCAGGACATTATTATCAAAGACAGTCAATATCT
ATTTAGATATACCCACATAGTTAGCCCCCTTTTTGACTCCTCGTTTTTTCTGTATCTCAGTTTCCCAGCTGCGATCATT
TCTGTCTGCCTGAAGAGTACCTGCAGTGCTTCCTTGAGTACGTGAAAGCTGCTGAGGAATCTCTCAGCTTTTATTTTTC
TGAAAATGTCTTTATTTTAGCTTTGTTTCTGAAATACATTTTCACTTGGTATAGAATTCTAGGTTGAATTTCCTTTTCC
TTAGGCATTTGAAGATGTTTCATTGTTTTCTGCTTCCATTGCCATCCAAAGTCTTCTAAAACTTCCCTAGGTAGGTAGG
TAGAAATATTTAACTCAAAGGATGAATAAAAATGTATCCACAAACCCATACTTCTTTTTTTAATGGGATTTAAAGTTTA
TAGATATTTAGTATAAAGTATTTTTACATCTGCAGATTGAATGCAGATGATCAAAGGAATCAAGTATTTGATGATTCAA
AATAGAGACCTTTGTTTTACATATAGACTAAGGGTTGGTCCAGGACTATCAAAACAATTCTAGGAAGTATTTTTCTAAC
TCTTGAAGAGAGAGAGAGGGAGCATAAAATGTACATAAACCTAAGTTAAAAGAAGTATGTAAAAGTATGTTAAAAATAA
TGCAAAAAGCATATATGCATATATTTTGCTTGAACTTGATTTCCACTGACTTGGAGTAGTTCATTCTCTAAGAATCTCA
TGTCATATTATTTTATATCTTTCTCATTTGTGAAGTCATTCAAGAGATCCTGCCTTGTATGTGTTTTCCAGATAATTTA
CACTTTTATTTTTACATAGATGTTGATTAGCTGTGTTTCATTGAATATTCTCAGTTTTGGGTATCAGTTTTCAGCAAAA
CAACTAAATGTGACACCTTCCTACTGAGCATATTGGGTCTATACGTGTGCATTTGACTTACGACTTATATTTTCACCTA
AAAAATATTTTGGATACAATATTAAATTCTTTTAGCATTAATAGAGTGCTTGAAATATGAACTTAGTGCTTTTACTTTT
AAAATATTTTAAAATTTTGATATTTAAAAATTTGATATTTTAAAATATTTTTTCTGTACTAAAATGCACTACAATATAA
TGTGACAATTATGAATATGGATTTTAGATTAAGACAAACCTGGGCTGGAATAGTAGCTCTGTTCCTTACTAGTTGTGTA
TCCTTGGAAAAACAACTCCAACTTTCTAAGCATTAGTTTCCTTATCTGTAACACAGGGTCCATAATTTCTACCTTACAA
TGCTGTTTTAAGAATAAACGAAGTGGGAAATGAGTTAGTATCATATTCATATATGGCAGCCATTATTATTATTATTATT
ATTATTATTATTAAATTTCTATAGTATGTTATTGCCTAAGTTTGTTCATAGAATAATGTATTGGCAAATAATATTCCAG
TAGGAGAATTATTCTTATAAAATAAATTAAAGTAACTTACTTTATTCTTTAGAGTTTACCAAGATAGGTATATTTAGTG
AACATGGGAGTCAACAGCNTATAATAAATTCTGTATTCTTAATTTAACAAGCATTTATTGAGTCTCTAACAACAAGCTT
AGCAGTGTTTAAAACACCATGGCAGGGCTGGGCATGGTGGCTTATGCCTGTAATCCCTCACTTTGGGAGGCCAAGGTGG
GAGGATCACTTGAGGTCAGGAGTTCGAGACCAGTGTGGTCAACATAGCAAAGCATCGTCTCTACTGAAAATACAAAAAT
TATCTCGGCATGGTGGCAAGCACCTATAATCCCAGCTACTTGGGAGGTTGAGGCAGGAGAATTGCTTGGATCAGGGAGG
TGGAGGTTGCAGTAAGAACTCGCCACTGCACTCCACTCCAGCCTGGGCGACAGTGCAAGACTGTCTCAAAGAAACAAAA
CAAAACAAAACAAAACAAAAAAACTACCACGGCAGGAGGAATTTCAAGCATGTGAAAGCTGTTACCAAGGATAATTGTG
CCTCCATCACAGGTGTCTGCCTCTCCCCATCTCTGCTGTCAGTGCTGGAACCCACACAGTATCACTTGTCTGGGTTTTC
ACAGTAGCTGCCTTACCACTTAACTCCCATTTATTGTCTCTCCAATCCATCCTTTATACTTTTTCCAGAAATTATCTTT
CTAAAACAAAATCATGCCATCATCATTCACACATTCATAGACAGCTGTTGTCTGTGGAAAACACTTCAGCCTCATTAAG
ATGTAAGGCCCTCCGTACTCTTGCCCTTCCAGCTGTATCACCTCCTGTTTCCTTTCCTGCAGCCTATACTCCGGCCATA
GGACTAATTGCAAATCTCCATTAGTACCGTGTCCTTCCCAGCTGTTATTTTAGCTAGACATGTTTTTTTAGCCATTTCT
TGCCTCTCAAAATTGTACTCATTCTTTAAGATATAAGAGAAACACCATCTTATCTATAGTCTCCCTAGATGTAGAGGAT
GAATTCGAGTGTTAAAAGCAAGAGGTGGGCGTTGTAGTGTTCTAAGGTAGGGAGACTAGGTATAGAAAGAAACCTTGAG
ATGGAAACCAAGGACAGAGAAACTTTTGCAGAATGCTGTCTCTGTGGGCTGCCTGCCCTGTCTTTCAGCTGGAAGTGGT
TCTTCCTTTCTGTGTTCTCTTTCTCTGATGGGCTGCTGAGAATTATTGCATGTAGGAAGCCAGAGAATGTCTCACTGTT
CTCCCAGCAGCTGCTGCTTAGGGCTCTCTTACTCCACTCTTTTTTGATTCCCTGGTCTCCTGCAGAGCCATTTATTGTC
TGGACCTTCCCTATACGTTGTCTTCCCCTTAGCTCAAGGCCTGGCCTCTCCTTATCTCTCCTCAGAGTTTGACTTCTGA
TGGGATCTGTTGTGCTGGAACTAGCTGTGATGTTTCTCTTCTTCCTGCTTCACCTATGGGTTGGTTCCTCAGCCCTTAT
ACTGGTCCCACTGGCACCAGCCCTGACCCGATTAATTCCCTTTCATCGTCCTCCATACCCAAAGGTCCTGTCTTGGACC

Fig. 9.25

AGGGAGGCTCACTGGGCCAAGTATTCATCACAAATGTTAATAAATATAACCTAATTTTAAAAGAAATATCTCCAAAGAG
TGTAGCCTTCTAGGAGACTGAGTACAAAAAAAAGAAAGGGGTGGAGCAGGACAGAGTATGAAAGAAGACTGCAAGAAAA
GGTCAGGTACAACTGGGAGAGAAAAATGCAGAAGCTGTGGGCATGCAAGGCCAGAAGTGTAGCCAAGAAGCAGNAGGTG
AAGTCAAAGGTGGATGAAGGGAAAGAAAGATGAAATGAGAGAAAAAATCCTAGGAGTCTTAGCATTGGAGGGGGAACTC
AGGTGCGAGAAATGATCTAATAATAGTTGAATGGAGAGAAAATCAATGTATGGTCAATCTTCATTATCACAGATTATGT
GTTTGCAAATCCACCTACTTGCTAAAATTTATCTGTAATCCCAAAAGCAATCCTTGCGGCGCTTCTGCAGTCATTTGTG
GACGAGCGTGAAGCAGTGAAAAATTTAAGCAGTGCCACATGTGTATTTCCAGCTGAGGGTGAACAAGGGATGCTCAGCC
ATCGTGTTTCAGCCCTCATGCTGTAAGCGAGGGTCCTTTCCATGATACGTTTAATGCTGTGTTTTTGAATTCTTGTGTT
TTTCACTGGTGATTTTGTCATGTGAAATGGCTTCCAAGCATAGTGCTGAAGTGCTCTCCAGTGCTCCTAAGCACAAGAA
GGCTGTAATAAGAAGAAATCTGGCCAGGTGCCCTGGTGCATGAGACCAGCCTGGCCAACATGGTGCAACCCCATCTCTA
CTAAAAACATAAAAATCAGCTGGGCCTGGTGGTGTGCACCTGTAATCCTAGCTACTCGGGAGGCTGAGGCATGAGAATA
GCTTGAACCCGAGAGGCGGAGGTTGCAGTGAACCGAGATCATGCCACTGCACTCCAGCCTGGATGACAGAGCAAGACTG
TGTCTCAAAATAAATAAATAAATAAATAAATAAAAGAAAAGAAAGAAAGAAAAAAAAAAGAGAAATCTGCATGTTGGATA
AACTTTGTTCAAACATGAGTTATAGAGCTGCTGGCAGGGTGTTTAGTGTTAATGAATTAACAATATATATTAAAATAAG
CTATCTTTAAATAGAAACACACAAAAAACAAAGTTATGTATTGATTAGGTGATGAAAATATTGTGACCAGAACTTGCAG
AAACCTGATCTTACATTTCCCCTGGGAGCAATGGTTCAGTATTTGCTAATTCAGTGTTCTCAGTGACTTTATAGAATGT
AACTGCCACAAATAACAAGAATCAACTCTGTAAACATTTTTGTTGGTCAATGGATATGCATGTTTAGACATTTTGTAGA
ATTATAGTCAACCCAAGTGAAATGGAACTCCTTTTATTTGACTTGGGAAGTTGCTCTATTCTCTTCTGTTTCAAACAAA
ACTCTAAATAAAATCCTCTTTTGTTCTGGTTTATTTTAGCAGATGTTTACTGGTGTTTACTGGCAAATGTGTTGAGTAA
GTTAGGTAAAGTTGACCTAGACACAGTTTTTGCTCCCAAGGAATTCTCAATTGATCATGGAAGACAGGAGATGTGTGTA
ATCAACAGTATTGACATTAATTTGTATTCCTGGAACAGGTATCGACTAGAGTCAAAGAAGGTTTTGGCTGGTCCTGAAC
AACAAGGAACCCAACGTAGGTTCACAAAATAACCACATATTGTCCATAGAGTAGGTGTCTACAACATGCTAGTGAAGGT
TGACATTATCTTAGAGCTTCGGGGATTTATAGATGGAAGGGATCCTACAGGCCCAGTATGTGACAAGGACCTGAGCATG
TTTAGATGTAGAGCTAGAACTGAAAACCAAGCCTCATGGCTGAAACTGAATCCTTTCCCACTAAACCATACAGGCTCTA
TGCGCTCGAACTAGTTATTGGAGTCCCGGCTTAAAATGAGCTCATGTTCCAGAAATTCCACTTAGGTCAGATGTTTATA
AGTCAGTCTGAGGTTGTTCCAGGATGAGCTCCAAGGGGTCTGTTTTGCTGTATATGAATATTTTTATAGAAGGAAGCTC
ATAAATTTTCATGTGATTCTCAAAGGAGTTCATGATTCCAAAAAGTCTAAGAACTTCTGTGCTTATTCTGAGGTTAACT
GTGCACCACAAATACTAAATTCTATTTGGGGTGGTGTCTTGACATTGTATTTTGTATCCCTATCAATCTAGCAGAAGAT
TTTTTTTTTTAAATAAAGAAAATGCTCACTCTTGGCTAGGATGTGGTGAAACAAAACTTCCTATATTGTCAGTGGCAGT
ATAAATTGGTATGAATTTTCTAAAAAGACATTTTCCACTTTTTGCACCAGATACCAAATTTGTCTTTCAATAATATATT
CTAAGAAAGCAATAAGAAAAAGGAAGTAATTAGAAATTATGTATAAAGATATTTATAGCATTTTTGTTCATAATATGAA
AACTAGGAATCAAAGTGTCTAAGAATTACAGTTTTAAAATATCACTTAGGCCGGGTGCGGTGGCTCAAGCCTGTAATCC
CAGCACTTTGGAAGGCTGAGGCAGGTGGATCGCCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGCAAAACCC
TGTCTCTACTAAAAATACAAAAATCAGCTAGGCATAGTGGCGGGTGCCTGTAGTCCCAGCTACTCAGGAGGCTGAGGCA
GGAGAATAGCTTCAACATGGGAGGCAGAGGTTGAGCCGAGATTGTGCCACTGCACTCCAGCCTGGGCGACAGGGTGAAA
CTCCATGTAAAAAAAAAAAAATCACTTAATATTATGAAAAACTGTTTATGACAAGACATGATGTGAAAATAATCATGGCA
TATATAGCATAATCACAATTTGTTTATGTGTGAACAGAATAACATGTTAACAGAGGTTATCTTTTGCTAATNGGACTAG
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GAAATATTGCAACCATATTTTGTCCCANTTGAACTATGATTTACTTACGGGAAGTCCTATCCTTGTTTCTTAGTTTCTA
CATTTTAAAATGTCTCATCATTCATTTTGGCTGAAAGTTAAAATGCAATCTCAGTTATTTCACGTTAATTCAATTACAA
GCCCTTCTCTTCCCACAGTATCATTTCATCTTAAACCTTCATACTCAGCCTCCTTTGCAACTCTGGCCTCTCTTGCTTT
CCATTCCTTTTTGTTCTTTCTCTGATTAAAAAAAAATACTAAATTCTGTCTGCTTTTCTTTGACAGCATTAGCCTTTTT
TCTCCTCTGCTCAGAATATAATTTTTGCTATTCAGTTTTTCAAATATTTACCACTGTTCCCTTTGTTTCTTTATCCTGG
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TAATTAAAAAGTATGTATTCTTTTTGGGATTTCCCAAAGTATTTTCCCATTATATCAGGAACACATGTGTATATGTGCA
TACATAGGGTATGCATGAGAATGAGTGTATTCACGTGTGCATGTATGCATTCATGTTTGTGTGCATGTTGGTGCATACA
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CCTACGCAAGTAGACACTGCAATGATGCTGACTGCCTGTTTGCCTGTCTCTGTATAGCCACCTTTCAGAGCTTGCCATC
TGGATCTCAGACAGTATGCAGAGGAGAGGAATGTTCTAATCCACCCTGGTACCAACAGGCTGGCATCTGTACTTTGAAA
GCTTTGATGAAGAAGATGCAAATTGTGTTGGCTGTGTGGGCTTTTCAGCTGCTTCCTGACTGGGCTAGAGACAGGCAGC
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ATATGTATGAATGCAGACTGAATTAAAATGGCACCCTAAGGGAGAAGCCAAGGACCAAATCAGGAGACCCTCTAACTGA
GTCAGAAATCAAGGCCAGGATTTATAGGATGAACATTTTTAAGTGTACATTAGAATGTAAAGTAGGTATTTGTAATTGA
AGTACTATGCTTATTTTATTTCCATAAACCTAAGGTCTGGCTTCGAAGTGGCCTCAGGGTATATCCGTCAGCACTGAGC
CTTGTAAATTTGCCTGCTAAATCAAACCTATGATGAAAAGAACCAGGCAAATAACACTGTCTTGCAGTGTGCAAGTCCC
GTGGCTGTATTATAGAGTGCTCAGCTCAGTGTTTCACAGTGGAGAAGAACGTACGTTGATATGCTTTCTGGGTTTGAGA
GCTCTTCCTTCTTCATCCAGAAGACAGAGCTGGGTAGAGAAAAGGATAACCAGCAAGACAAAGGCTTTATCCCAATATT
ATATGTTTAAAACTCAAAGAGATATGGTGAAAATGGGACTTTATTAAATTTGCCTGATTGGAAACAAACATGCAAATTG
TACAAGATTCCTAAATGTGCCAAAATGGCAAGGAGAGAGCCCTGACGAGCATGGAGAATAGTGAGTAATGCTTATGTCC
TAACAGTGCCCCTTGCCTTCATTGACCTTTGGAAATATTGTGAAAAAGTCAACCTTTTCTATTCTGTCTGTATAGTCTT
ACAGTGTTTCCTCTCTTTTTCTCCCTCTAGGGAGTTATCCAAAGCCCCCTTCACAAGAATGCTAGCTTTCAGGAATAA

Fig. 9.26

TCAATCAAGCACACCTTTGAGCAAATGTAAGATTTATGTTCATTCTATTTAGATATTTGATTTTGACATTGTATCCTTT
ATTTTGGAANAAAATGAATGTCACCTACATGCAGACAGATGAGGCATTTTATGCTTTTGTTGGGGGAGGATAGGTTTAG
GGGAGCTCTCCCATTTGCAACCCGGCTTTAAACCCCACGTGGCATGAAGAAATCAATTAAACAGACAGAAACTCTTCTG
GGATTGGGAATCTGGCTTCTCATTTAAAAGAATATCCCCATTTTTCTAACCATAATAAATTTTAATTTTCAAGTAAAAG
CCATTACGTCAATTTTAATGTCAAATACATTTTAAAAAGAAGATGCAGACTGTTGAAAAGATGGTGGAAATGATTACAA
CCTAAGCTTGGAGCTTACTGAAGTCAATCAACTTCAACCTGGAGCTTGCTGCAGTTCCGACTGCACTTAGATGGTTTTG
CTTTAGTTTCCCCATTTTAGTGTAGCAGAGGCTGTTTTGTTACCTGATCTTTTTTTGTAGAGAGAATGAAACTGCCTGA
GGGACAATACAGTGCACTGGAGAGGGATGAAATAAAGTCTCAAGAGCTGCTTGTACTATACCACCTACCTCAAACAGCA
GATGTTACAGAACTGCTTTTAAAAAAATGTTGCCTTTCACATGTCATGCTAAAAATATATACCTAAAAAGACCTAAAAA
AAAAAACCTTAAAAGAACTAGAGAAGCAGGCTGTAGTTATACAAAAGCTATATGCAAGATCATGGAAGCAAAAAAAAA
TGCATAAAGACATATTAGAGCTTTCTTAAGTTCCAAGGGAGCTTTTGATAATACATTCAAAACATAAATGGGAAAGTCA
TCAGAGAATTGCATAGTCCCCAGGAGACTGCAGAAGGCTTTGAAATGGATTTAATAACATTGATGGGTCGGATAGGAAG
CCCTTATTCCCTTTGACTTATCATCTTTCTTTTCTTTTTAAAATTCACTTTCAGGAAATAGTTACATGATCAACTCTAC
CTGGCTGACTCAAATTTGGTTCTCGGTTTGAACTCTAGTTATCTGTATATCTTACAGCTGTCCCCTTCAGTTGCTTATC
ATGTGACTTGTCATTCTGACTGGGTTTGAAGCTTACAAAGGTCAAGAAACACATCTTTCATATCTTTGGAATTTCCTCT
GTAATTTTGATACCCTGATTGTGTTTGCAGATGGTGTTTAACAAATGTTGCCTGGCTCACTGGATACTTCCAGATTTTA
AAAAAAGTTAACAGAATGATCTTCAACTCTGCTTCCATTGTTAATATTTATGTGCTATATTCTGATAAACCCGTAGAAG
ACCAGATAAGACAAAAGCAGGAGAAACAAGTTGTAGATACAATAGTGAGCGTGTAAAAGGCATTTAATAATGCCTTGAC
ATGAATAATAAACATACCAGTAATAAAGATACAACAACCTTACGTTTCCATAGATTCTTGATTCCTCTAAAAGCACTTT
CATATAATAAAGGACAGAGGGATAAAGGGAGGAGTAAATATAAATGCAAGGAATACCAAAGGAATGTAGACATGAAAAA
GCAAGAGGACCAAAGCAAGACAAAGAAAATAATAGCCAAGAATAAAGAAATTGAGGGAGAACTTACTAATAACTTGGAA
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GTCTTGTTTTCTGCTGAGTTATTAGGGAAAGGAGTATCGTGGATTCCCTCACTTTCTTTCTCTTCCATTTTTATTCGTG
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CAGCCAAGATGGCCGAATAGGAACAGCTCTGGTCTACAGCTTCCATCAAGCTACCAATGACTTTCTTCACAGAATTGGA
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CTGAAACTGGATCCCTTCCTTACACCTTATACAAAAATTAATTCAAGATGGATTAAAGACTTAAACGTTAGACCTAAAA
CCATAAAAACCCTAGAAGAAAACCTAGGCATTACCATTCAGGACATAGGCATGGGCAAGGACTTCATGTCTAAAACACC
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ACCATCAGAGTGAACAAGCAACCTACAGGATGGGAGAAAATTTTCACAATCTATTCATCTGACAAAGGGCTAATATCCA
GAATCTACAATGAACTCNAACAAATTTACAAGAAAAAAACAAACAACCCCATCAAAAAGTGGGCGAAGGACACGAACAG
ACACTTCTCAAAAGAAGACATTTATGCCACCAAAAAAACACATGAAAAAATGCTCACCATCACTGGCCATCAGAGAAAT
GCAAATCAAAACCACAATGAGATACCATCTCACACCAGTTAGAATGGCGATCATTAAAAAGTCAGGAAACAACAGGTGC
TGGAGAGGATGTGGAGAAATAGGAACACTTTTACACTGTTGGTGGGACTGTAAACCAGTTCAACCATTGTGGAAGTCAG
TGTGGCGATTCCTCAGGGATCTAGAACTAGAAATACCATTTGACCCAGCCATCCCATTACTGGGTATATACCCAAAGGA
CTATAAATCATGCTGCTATAAAGACACATGCACACGTATGTTTATTGCGGCTCTATTCACAATAGCAAAGACTTGGAAC
CAACCCAAATGTCCAACAATGATAGACTGGATTAAGAAAATGTGGCACATATACACCATGGAATACTATGCAGCCATAA
AACATGATGAGTTCATGTCCTTTGTAGGGACATGGATGAAATTGGAAATCATCATTCTCAGTAAACTATCGCAAGAACA
AAAAACCAAACACCTCATATTCTTACTCATAGGTGGGAATTGAACAATGAGAACACATGGACACAGGAAGGGGAACATC
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TAATGGGTGCAGCACACCAGCATGGCACATGTATACATATGTAACTAACCTGCACATTGTGCACATGTACCCTAAAACT
TAAAGTTTAATAATAATAAAATTAAATTAAAAAAAAAAAGAAAACCTGTAGCTCTGGTATCATAGTGGCTGTAGTGACT
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CATAGCAATAATTCCCATTTCCAAATGCCTGCCATGGGTCAGGTTCTTGCTATGTCTTTGGCACATATTATCTTTAAGT
CTCATCAACTCTGCAAGGAAGGAACAATTGTCATTCACAGTTTACAGCTGAGAAAGCTGAGGCTCAGATTATTTCAGTA
AGCTGCCTGAAGTCATGCAGCTAAGTGGCAAAGCCAGGATATAAACTTCATATGTATGTTCACAAAGTCCCCGCTTAGT
CCTCCATGGAATTTTTAGAGTTATTTAAAATGACATGTGTGAAAGTGTTTTGAAAATAGCAAAGTTCCTTGTAAATGCA
TGTTATTATTATCATACTGATGAATATAAATTACTTAACATCTATTTACCAAGTTCCTTATAGATATTTAGCACTGAGT
CAGTTTTCATTTTGGACAATCTATGGAATTAGTTATTTCTCTAATGTAGTATTACATAAGATGCATTATAAATAAATCT
TAAATATTTTCAAGTGGAAATTTCTTCCATCCTTGGGACCAGGTTCTTCCTTCTTCTCCTTCTTCTTCTTTTTTATTTT
TATTTTTTTGAGACTGGGTCTCTGTCACCCAGTCTGGGATGCAGTGGCACAATCATGGATGGCTCACTGCAGCCTCGAC

Fig. 9.27

CTTTTGGGTTCAAGTGATCCTTTCTCCTCAGCCTCTCCAGTAGCTGGGACCACAGGTATGGCCACCACACCCAGCTAAT
TTTTTTATTTTTCTAGAGATGGTGTCTCACTATGTTGCCTAGGCTGATCTCAAACTCCTGGGCTCAAGTTATCCTGTTT
CAATCTCCCTAAGTGCTGGGATTAGAGGTATGAGCCACCACACCCAGCCTGGGTTTTAGTTTCTTTTTGATCATATTTG
GAGAAAAAAAGAAAAGAAGCAAATTTGCTAATCAAAATTGAGTGAATGTTTCAAGAAACAAAACCAATTAAATGTAGTC
CAACCTTGAGAATCAGCAAGTAAAAACCTCTGAAGCCAAGAGGGCTAACAGGAAAACTGAAGGAGAGGAGAGAAATATA
CCATAAGCATTTTCAAACCTCTGCTTCAAATTCTTGTATTTATAAATGGTCTGGCCAGCAGTGCAACTCTCCCTGTCT
CGCTCTTTGTTGTTTATTTTTTGGAGTCTTTAATGACCAATCGGGTTGCTGAAATTTACTTGAAGAGTTTATTCTTGAT
TCTGAGGTATAAGATTTTCTGTGTGAAGATGGCTGGGAATCCACACAACTCTCCTAAAATAAGCACCAAGTTTTGGAAA
GAATTTTCTCTTGTGGAAAACATCCATTTCCAAAGAGAGCCATCAGCATGAGATTGCTTTTTTTTCTTTTTAACCGCCC
CCAACCCAAGGAGAAAGCTGAGGGGAGTCAGTCTGTGAAGCAGCCAGGAATCAACTTTCATGACAGTTTTAACATTCAA
GGCAGACTTTTCCCTTGGTCTTTTGGAAGAACTGCTGAAATCTCAATGAAAGTTCATGAAATTCTGTAGAGGAATCAGC
TGAGTCTAGAAATAAGCTGTTCCTTATTGTTTCCTCTGTTTCCTTATATATAAAGAGTGGGTAAAAAGAAGCACCTTGG
AAAGTCATTGTGAGATTAAATGGCATAATGCATGCACATCTCCTGGCACAAACTAATCACCACTGTTGTGTTCTAAGCC
AGTTTCCTAAATACACAGATCCAGTTGTTTTTAAGTCTCAGTGTGAACTGTTTATTCTGTTTGGCCCATGTGGATATC
TAAAGGGTTCACAAAAATGCTTTCAAATTGATAAAATATGGAGGAAGCCGCTTTTCTAGTCTTCATCAAGGATCTGCGT
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GGGTGGCTGATCACCTAGGTGGAATGAATGTGGGGCCACTCATCCATGCATTTTTCTGCAGGTGAGATGGGATAGGTAG
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CTGTTTGGATTTGATCATACTCTCTTGAGTACAGGAACAAGAGGGCAGCCTAACATTGTCCCTGAAGCCCTCTGCCCAC
AGCCAGTCAGATCCATGTCCAACCTTAGCAGCTAGGATGCTGGCCATCCCTGTGGCCCAGGCCCCATTTGTACAAGTTC
TGGGACTGGGGTGAAGGTATTCTTGTTATAATGCCTTTTTAACACAATTCTGGCCTTTTGGGAGAGAGAGTCAATGTTT
TACACTCTGGGGANTCAACTTGTGCTCGGATTCACCTTTGGCAAGGGTCCTTTAGTGGAATGGACTCTGCCCAGGGAGT
CAGTGGACTGCTGTTTGCTGGTTGATTTTAGACAAGTTACTTTATGTTTGTGGGCCTCATTTTCCTCTGAGCAAAGACA
TCTCTAACCTGAGTCACAGCACAATCTTTGTGGTCTGACTCTGTCTGGGGCATGGAAAATTGTGTGTGTGTGTGTGTGT
GTGTGTGTGTGTGTGCATGTGTGTGTCTCCAGTCACTGGTTCTGGGGATGTTCCTCCAAACTGTTCTTGCCTTCTTTCT
GTTATCCAAACTTTTCTGTGCAGAAGAACAAGATTTAAGTTTGAATGGATCATTGTTTCTTTTCGGCTAAACAACTGCT
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TTGCAATTAATTTTGGAGTCAGATTTTGATAGAAAAGTAGAAAGAGGATAGGACTAATTGACTTCTGAAAGAATTACAN
GTGGCTGGTGTGCCCCATGACTCACACTGTAATCTAAATACTTTGGGAGGCCAAGGTGGGAGGGTCTCATGAGGCCAGG
GGTTTGAGATCAGCCTGGGGAACATAGTGAGACCCTGTCTCTACAAAAAATAAAAAAAATTAGCCAGGCTTAGTGGCAT
GTGCCTATGATCCCAGCTGCTTGGGAGGTTGAGGTGGGAGGATCACTTGCAACTGGGAGGTTGAGGCTGCAGTGAACCG
TGTTCACACCACTGCACTCCAGCCTGGACAACAGAGCAAGATCCTGCCTCAAAAACAAAAACAAAAACAAAAAAAAAGA
AAGACAAAAAAGAATTGCAAGCGGCCAATACATAAGAGAAGATGCCTAACACCTAACCCCCCAATTAGCATTGTGATTA
TAAAGATAACAATGCTATCATTTCCCCACATCATTTTGGCAGAAATGTGAATGGATGGTTAAACTCGGTGTGCCTGTGA
GTTTGATGAAATGGATGTGCTCATACAACTACCTGATACAACCTTTTGGAGGGCAGGTGGCTGATACTTACTGAAATGT
GAAATGTATAATCTTCTTGCCCAGAAATTCTGGGTCTAGGACTTATCCTAAGAAGACAACTATACAAATGTAAAAATAC
ATTTATGTAGTATGTTTGCAAAAGCATATTCATGGGGAAAATGAGAAATAACTTTAATGTTTATCAATAGAGAACTGGT
ATAGTAAATTATGATAAATACCTACTGTGAAATCCTGCATAGTCAATAAAATGATGGTGTAAAGCTTCATATATTAATG
TGAAAAATTATTTAATGGTACAAAACAGGTTATGAAACACAACAATCACATTTCTATACAGTCATATTACTAGAAATAT
GGGAAGTTGTTAATTTAAATCTGAACAGTTAGAATTTCAGGCTACCTTTACTTCCTTTGCTATTTAACTGTTTCCTCTC
CCACCTATCAACTCTATGTCCTTAGGGAAACTTATTTAACCTTTCTCACTCTTGGTGAAAATGGAGATAATACCAAACT
CTTAGAGGTTGTTGTGAGAATCAAGCAATAAAATACATGTCAAGCACCTAGTAAAAAATGTATTTTGATTTTTTTTTGT
CATACACAGTTTCCTTTTTTTCTTTCATTATGTGAGTACAAACAGCTGTGTTCCTATGCCCAGATTCAAAGAGAGAAAG
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CTAAGGCTGCAATGTGTCAGAAAAAGACCATATTGAGTCATTGTTTTCTGAAGCCAAGACAGGAGATTGAGAGACGGAT
GCTGATGGGCAGCCTAAAATAATATTTCATTCTTGTCATCCTTAGGCAGTTTAAGACCAAGTCATTTTGGATAGATCTA
CAGTTTCCCTCTCGGTTTGGAAGAACAAAGCTTTTGTTATTTATGTTCTTAAACAACAGCGCTTTGTCCTATACTCAGG
AGCGTGCAAAGCAAACAGAAGATTTCCTGAACGGCCATCCCATTTATGGTGAGGAGTCAGTCCAAGAGGTAAGTAGACA
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AGTCAGGTTTGGGATTCACTTCTCTGATACTGTGCCAAAGTTGGTGGACTCAGCCATTCTGAAACTCACTGTTCACTTG
GGGCCTGCTTTGCACAACAAAACAAATAGCCCTGTTTTGCTTTCCATGTCTGAGGCAGAAAAATAAAAATGGCAATATT
TTGAGTGTTTTTACATTGGGAATTTCTGGTCCATAGATAATTATTTCAGATACCCCTGTGTAATCTTTTCAGAGCTGTT
GAAAACTGTGGAATAGGGGATAATTAGGGCTCAAGAGATTTCATTAATGGTTAAAGGATCATTAGAAGGACACGTACTG
TATCCCTCTTCTTATTTCTCTTCCTGCACTAAAACAACTCCTGGCTTGCTACCATACTTCCGCACCCATGTGCAATTTT
CACTTAGCAAAAGGTCAAGTCTAAGTAGAATCTATGAAGTTGGGATTGATTCTGATTGGTAATAATGCTAGCTAGCAAG
CATTGAAAATTTGTACCAGGTTTTCTGTTAAGTAGTCTGCATGCACTATCTCAATGATTCTTAAGGAGTGGTCCATAGA
TCACTGGCTTTACAAACATTGACGCATGGTGGTGGGTGTGGGCAATGAAAAGGCAGATTCCTAGATTCTACTCTAGATC

Fig. 9.28

CATGGGATCAGCATCCTGTAGTGGGAGCCAGGGATCTACCATTTTAGCAGGTGCCTTGGGTCATCATCCTTATGCACAT
GACATTCGAGAGCCACTGTGTTATTTCCTAGTGCAACTGTGACTCAGTGTAATCTGCTTTCTTTCCACTCCTCTGATTT
CTGTGTGTAAATTTTCATGACAAAAGTTAGACAAAATACCATGGACTGAAGTTAGATATAGAGCAACTCATGTCTCTTT
TAGTTGCTGGTGATTGCAAATNTATCTCCATGGCCAAATTGCTTTTGAGGCACTATATGTGATATTTATCTGTATTGTG
GGAAGGTTAAAGAAGTGAGAACTCTTTCCTTGCTTAGTGGTGGCCTGTGCTCTGGAGGTAGAGAGGAAGACACAGGGGC
CATGGAGGTGGGACTTACAGGTGTGGTACAGGTTGTATAATCATGATGGTGACCCTGCATGGAGAAGGGAAAGCTTGAC
CTTTTCCTTGGCTCAGGGCTATGCAAATAGGGCTGGCCCATTTCTGAGAGGGGAAGGTAGCTGATATGCAGGTGTGATT
CCCTAGGGCCCAGAAAGACCTGCCTGCCTTCTGCCTTTGTTGTCATGCTTCATGAGGCCTGAAATGTTCACTGGTGGTT
ATTTCTCTGGTTCTCAGCTTTAGCTCTAGAAAGCCCCTATTGAAATGACATGCCACTTGGAAGATAGCAGGACCATTTA
CTTATATTTTCACAGACTGCTTTAATCTGCTACTCTGGGGATGGCACACAAAAAGATTTAGTTGATGGGAGGGAGGTTA
GGCCCCTTTGTGGGCCACAAAGAAGAATCTGGGGAGCCCAGGGAGACTATTCTGGGGGTAGAAGTGAGGAGGAAAGGCT
CTAAAGACAAACTGGACCTATGTCACAGTTCCGAGGGCTGTCCTCCAGAATACATTGTTTTCCTGAAATTCTCCAGCCC
CTTCCATCATTTTCCTCTCAGTGAATGTCCAGTGCTGAATAACTGCCCCCTTAGTCACAGGACTGGACTGCAGCAGTGC
TGCAGGTGGTGAGGCTCAGTGGCACAAGTGGCTCTGGGAGGGAATCTTGATGTCGGATTCTGTAGCTGCACCAGCAGAG
GGGGAAGAGGGAGATAATTACCCACCTCTGAGTCTGAGATCCCCCTACCCCCAGTGCATTCTTCTGCCAGGAGCAGGAT
CATTAGAATAAGTGAGACTTAGCTTAGCTCATTCAACTCCTTGCCAGGCCCCATGCAAAGCTTTCAAACTTTCAAATAT
ACGATCATTTCTAGAGACTATGTTGGGATCCCCTGCATTTCTTTATCCATTTGTTGAGAAGGACCAGAGATGATGCCTA
ACTTTAGCCAAGAGTTTGTCTGTGGGTCCGATAAGCCTCACATTTGATTTTATTGGAATTTTAATCTTGCAGAAAGTAC
CCTATGTTTCAATTTTAAAGCATTTTTTTTGTTAAACTGAAAACATCCCTCAATTTTTCCAATGTTCGTTTGTCCTCTA
GTGCTAATTTATGTGGTAAGTGGTACTGGTTCATTAATTTACTCAGGAGGGTGTAACCACCTTTCATGGAGAAGGGGTG
GCTAGGAAGGGGTTTCTAGTGAAGGAATTCATTTTTCTTGGTCTTCATGGTGGGTGCTGGGGAAGGGTGTGCAGTCAGA
GGGGCTGCATTTGCAGAAACATGGCTCTGTGTGTGAGCCTGGGTTCTCAGGAATAGGAAGCAGGTAGGTGCAGTGGGTG
GGTATTCATGTGACAGTGGAGGAAGATAAGGACAAAGATCATGCATGAGTAGTGAATGAATGAATGAATGAATGAATGA
ATGAATGAATGAATGATTGTGTATAGAAGTCCATACTCCTTCTCTGGGGTGGCTATTCCTTCACCAAGCAGACTCTGTT
CTTTCTTCTGCTGCTTCTTAGTGAGCACGTCTAAGTCTCAGTTGATATTCTCTTGCTCTGAGAAATTTCTCATCAATGG
GAGGAGAAAATATAATTCGCTTCAACATAGCTCATATTTAAGCTGAGAATTCAGCATGAATTCCAGACATGGTTCATGT
ATTTTGGATAATCAGCATAGCTGTTCATGATCGGTAACCCTCTTTTTTCTCCTCCTTCAAATCGTTTTTGGTTAGGTTA
CCATGACTGAAGATTAATGACTTCCATTATTTTTTTTCCCTCATGCAGGAATGTTTAAACTAGTCTAAACTTTGTACCA
ACTATCATATGAATCATGTCTACTACTGTTACCCCTTGTGTGTCATGTCCTGGGTTAGTGTCCTTGCATGACACAGCAA
AATACAGGGCAGGGTTAAAAGTGTCAATTGAGAACCAGGCAAAAAACTGATGATTAATAGTGACCAACACACTTCACTG
TGCTGTTATCTTAGAGGCCTTAAGGCAAAATCTTACTTACAAATATTAGTTGAAATGCAATATGTGATGTTAGTAGACA
CATTTCACCACATCTGGCAGTTCATTAATTCACCTTCATTTTTTTTTTCTTTTCTTCTTTTTTTTAATCTTTTTTTTTT
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ACCCATCAACTCGTCATTTATATTAGGTATTTCTCCTAATGCTATCCCTCCCTCAGCCCCCTACCCACTGACAGGCCCT
CGTGTGTGATGTTCCCTGCCCTGTGTCCAAGTGTTCTCATTGTTCAGTTCCCACCTATGAGTGAGAACATGCGGTGTTT
GGTTTTCTGTCCTTGTGATAGTTTGCTGAGAATGATGGTTTCCAGCTTCATCCATCTCCCTGCAAAGGACATGATCTCA
TCCTTTTTTATGGCTGCATAGTATTCCATGGAATTCACCTTCATTTTCAATATTGTGTATATTTATTGCAGTGAGCTTA
ATCCTAATAAAAACAATTTTATTTCTATTTATTTATGTTTTTTCAATTTTTTCTTTGAGACAGGATCTCACTCTGTCAC
TGAGGCTGGAGTGCAATAGCACAACCATAGCTCACTGCAGCCTCCAACTCCTGGACTTAAGTGATCCTCCCACCTTGGC
CTCCCAAGTAGCTGGGACTACAGGTGTGTGCTACCATGCCCAGCTATTTATTTATTTGTTTCTCTTTTTTGCAGAGATG
GGGTCTTGCTGTGTTGCTCAGGGTGGTCTCAAACTCCTGGATTCAAGTGATCCTTGGCCTTCTAAAGGGCTGGGATTAC
TAAAGGGGCGAGCCACCATTTCTAGCTGACAATTTTCTTTTTTTTTTTTTTTAATTATACTTTAAGTTTTAGGGTACA
TGTGCACATTGTGCAGGTTAGTTACATATGTATACATGTGCCATGCTGGTGCGCTGCACCCACTAACGCGTCATCTAGC
ATTAGGTATATCTCCCAATGCTATCCCTCCNGACAATTTTCTTTTAATGAGCAGTCACCATATAATAGGCTCAGTTCTA
AGCATGTATTTGCCCATTTAATCTTCACACCAGCCTAGGAGGTAGTTACTGTGTGTGGCACCCCTTTTATATAGGAGGAA
ACTGAGGCATAATGCTGTTAAGTAGCTTGCTCAGGGTCTAACAATTAAGAGTCAGAGCTGGGATGTGAACCCAGGTGGC
CTGACTCCAGAGTTTCTACCAACCACCATGTTATACTGCTTTACATGTTTAAAGCAAAGATATGGTTTTAGCATCAAAT
ATTAAGAATGCACTCCCCACATTTTTCTTATTAAATGTAATTGCCAGTTTTTGTATATGTCATTGTCCTAATGCTTTCG
AGAAACTTAGACAAAGAGCAAGACCACAGATAAATGGATCCTTCTGTTCAGGTCTCATTACCTAGAAGAGTTTTGACTG
CAATATATGAGTACTAAAAGTTGATGGTTTATGCTAATTTTAAGTGTAATATATTTTAGAATTTTGTCACATGCATTAT
TANTATGATTTCATATTCATGGCCTTAGGAAGATTAATTTAAACAATAACAACAAGAACAACAACAACAACAAAATACA
ACAAAAAATTTCCCCCATGTGCCAAGAGCAAATTTTGAGGTCCATTTATCCAGATAAAGTGTTTTGTTATCTGAACCAA
GAACATGAACTTTATCTTTATAGTGACCACAGACTCCCATCTCTAGTATCATGATTTTTAATTTGAATTAAAGCATTTT
TTTTTGCTTTGTTAAGATGAGGCAGGCCTTCTTGCTGACATTTTAAAAAGCAACTATTTTTCTTTCAGTTTACACTATG
AGGCATTGGCTCCAACTGTCAGCATTGAAACTGTCAGCAGTTCCCTACCAGGAAACTGGTTCCAAGGTCTAGGGTTTCC
TTAGGTAGAGGCTGGCACTGTGAAAATAATGGGGCTCTTTATCCATGTCACCTGGAATGGAGTTAATACCCTGCCAGTC
TTAGTTGATTTGACATACTAACAGGATGGGTCTGAACGTTTTCTATAGTTTACTCATGAGTGACTTTCTTTGGCTTACG
TAAATGGCAAGGCCAGACAAATTAGCTTATGGACCTAGCAATCATTCTTGGCCCAGATTTTGAGACACTTTTCAATCAA
CCATAGTTGCTCTAATACCTGAGATTTGCTGACAGTGCTTGGTTCAGAAAAAGGTTCAGTTTCCTGAGCAATTTTTCTT
TTATTGGGATCATCTTAATTCTTGTTTGCGGGGTTAAGATGAAGGAAATATGAGCAAGGACTGCACTCAGCTATTTGGG
TGACCCTTGTATACCATGAGCTTCTTAGATAGGGCCTGATGTGATCACCAGAAAACATTAATTGATCGTGATGACAGGA

Fig. 9.29

GATAGTCTCTCTAGCCAGAACCTGCTAATACAAGTCCTGATGAATTGAGAATGATGCCTGAAGGAAGCAGACTGACGTG
GTGCATTAGTAATTTTAGGCAAAAGAAGATAATGGTACTAGTATGTATATTTTTTAGTTTCCTTTTCCATTGCTTTGTT
TTGCACAGGCTGAAGAAAATAAATGTAAACAGCATATTATGGTGGCTCAGGGTGGATAATAATGGGACATCACTTCCTT
TGTTTCAGTGTGAGGTTGCCCCTGCTATGTGACAGCTCCAAGGACTAAAGATTTCAATCCCCAGAAAAATGTCGAGTCC
CAGTAACATGTTTCAGGTTATCATGATTATTATGATTATAGGAGGGGAAGAGCAGTGCTGGTCTTTTAGAAAGTTCTCA
TCATGAATGTGTTCTGGAGTGAACATCACTTACTAACAGATGAGCAGCTTGAAGTTGAGTCAAACAAAACTTTTAGTGT
TTGTAAGGGTCAGGGAGCCAGGGGACAGTCTGTAACTCAGTTGTATATTGACACAGAGAATGTACAAAAGCTGTGAAAG
CTTCCACTTGAATGACTGCGGATGGTTGCTGGTGACGGTCTTGGACAGTAAGGGTTTTCTTCGGAGTTGTAGGAGGTGA
AGTCTTCCTATGGGAAATTTCTGGACAAAAATACAAATGAAATGACTTGCAGGCCTCAGTTTAGAGTATTGTTGGCTTT
GTCTGTCAACAAATGGAGATTTGAACATGGGAGTTCAAGGGGATTTAATGAAATTTTATTAAGGAGATGAGAAGCAGG
GAGTCTGTGTTGAAAATTCAATAAAGGGCTTGTTTTCCATCTCAGCCTGGATAATCTATGTTATCTCTGAGTAAAGGGG
GTAACAATTCTAACAACCTGGCTTCCTTAGAAGTTTCCATTCTCATATAGTCACCGAAGGCAGCAGCACTGTCAAATAA
ACAAAGGTTTAATTAAATAAAAACTATTTAAACAGAGCAGAAATATTCTTCCCTGGCTAGTCACAGATTGGACAATTCA
AAGAACAAACCCTGGGGGGAAATTGCCAATGGATTACTTTTTCTGTTTTCTGTCTATTGCAACGTTTTTCTTTCTGGTG
TCAAATCTCAAGTTGAATTCAGTCAATTATCTACAGCCAAAAAAAGTGCATAAATGTCTCTTCTGTTACTGTTTATATG
TCACCACTAAATAAAGCAAAATTTTCTTCTCAGCTTCTTGCCTTAGGATTTTATAAGTCCAACAAAACAAATAAAATAT
TATGTATATTCTATCGTCACTATGAAAGCATAAGGATTGATTTAGTTATGTACAAGTTTATTGCCAAAGTTTTTCTTCG
TTGCTAATGTTACACTTGCTACAAAATGTATTAAAGAAACAGACAATTTGCTAAGGATTTGGAAGGATTTGTCATTGGG
TTAAGTACATTAAGTATCTAAGGGGTGTGGTGTTCTGGTTATGTGTATGTCAGTTTCACATATTTTTTTGCTTTCTTAT
TTTAGTTGCCTCTATAATCATTTTGACTTTAAAATGTTTTCTGCAGATCCTTTAATAACTGCAAATGTAGAAGTATGGT
GTAACAAGTAATTGGTATGACTAACACTAAAATGTAATGGGAAATAAGGATACTATTGTAAAGAAAACAAGAAAAAACCT
GGGGTAGGGGAGCAGTATTGATTCTCTCTTAGGATTCCTAAGATTCTCTGTCCCAACCCTTCTACCATGGAACATTCTT
ATGTGGTCTAAGTGTCAAAGACCAGAGGAACTGGGCAGTAACTTATCTTCTCAATTTTCTCTCTGAACATAGATATTTT
CTTTAAGATACGAAAAACTTTTAATTGTGCTCCTGAAACCCATCCCTGTCCTGTCTCAGCCCCGTTGACTCTTCTTTCT
GTGGGTGGGTGAAAAGCCTACCCATCTGCAAAGGTAGCTCTGAAACTGTTCTGGAAAATCCTGTATTTTCCTCCACAAA
TGATCGTTTTAGTTTCAAGTTTATTTCAGGTACATTAATTCTCCCCCTCCTCAGACTTCATAACAAATGATCCTGCACA
CGATTAGAATAGGAAAATGTAAAATAAAATCGAAGCATATCTAGTTGCCTCAGCGACTTTATGCTTATCACTTTCAGTC
TGCATTATTCTACTAAAAATAAAAAGAAAGATGAAAATTACCTCAGGCGTTTGCTGCCGTGCCTGCCCTTTGGTTTCTG
GGACGGCTCGGGTCCCGTAGCGCCGGCACAGCTGAGATTGCCAAGCCGGGAAGAGACCTTGCTCCAGGTGTAGCTGCGT
TTTCCCCAGATCACCTGTCCTTTTCCCCTCCGACAAGGAAGCTGTGATTTTTCTCTGGCCTTTAGAGGCAAAGTGATTC
CAGATAAGTAGATTAATGTGTAGAATATCTCATCTGTGTTGTTCCAGTGCAGCCCTTTCAGCTTTCCAGAGCCAGTTAG
ACTTGTTATGAGGAGCTAAGTGATTGGCTGGCTCTGGAGCTCAGTTTCATAGATTATAGCCCAGCGTACGAGAAGCACG
AGTCCTATAGTTGGCGTACCCTGAGGCCTGCCAGTTCCTGCCTTAATGCATATGTAGTCGTAATTGAGTTCTGACACGG
CCTTGGATGTTTCTGTCCTAAATAGCTGACATTGCATCTTCAAGACTGTGTGAGTAATCCTGATATTTTTTTTTTAAGC
TCAGTAAATTAATTACATGCCCTGGGAGGGAGTGATTGTAAGTAGAAAATACTGAACTAGCAGATGATTCGTTTTTAAG
GTGCTATACTATGTGTATCAAGTTCAAGACGATGAATCTTAAAGCTTCTAAGAACTGGCAGGGTTATTCCAGCTTTGTG
CCATGAATCACAGTCAAGCTGCATTTTGAAGGAGGCTGTTTGATGCATTTGCTAGCTCTGTTTGTTTTATGGGGTCAGT
AAAGTGGCAGAGGTCCAACAGGAGCAGGTTAAAGCAGGATGCTGGGATCAAAGCTTAGAGAGCACTTGAGTCAGGCAAG
TTTTAAGTTTTCCCACCCCCAAGCATCTCAGTCCAAAACTGAGAGCAAGCAGCAAATATTATAATAAATGCTTTGGGGA
CAGGGGTACACAGCAGATAGGGCACAGTAACAGGAGAAATGTAAAATGATGGCAGCAATACTTTTGTTCACTGTAATCT
GCAGCCAATTGAAGACATACACTATGAATAACTAAAACATTTTTATATGAACAAAAATGCTCTTCAGTGGTTCTGTTTA
TGTGGTAGAGGGCTGAATGAAAAACCATGCGCTTGTTGTAAAAAAGCCTTATAAAAAGTACATTAAACACATACAGACA
CAACCATAACAGAAGAAAGTATGTGGATTGGAATTTGTGATTGGAGCAGATCAAATTAAGCCAGGGAAGCCGTTATTAG
GTTTGTATGATTGCTGGGGGGTAACTTCTGTTGCTGACAAGGTTTAGGATAAAGCTGGAGCAGATTGAAGTGGAAAACC
AGAAAACATCAGCATTTCATTACCTTCTATAGCATACACTGCAGGGTAGAATTAATACTGAGTATAGACTGGTAAATGT
GAGCAGTTTACTGTTTGCTTTTAAATCATTATTGATTTCCCCTAGCCTATCATAAAAAATAATAGGGCTTTTGCCTATG
AAATTAGTGCTTAGAAATATTTTTCTTCCTCCCAAATAATTTTTATACTTTTTCTCAATACAGCACAAAGGTAGGTCAT
TAAAAATAAAGGGGTTCCTTTTCAAGTTGCTTTTGTCTAATTTTTCCTCTTTAGACCTGTAGATACAAATGTATGTAT
TTGTGCTATGTATAACTCTCAAGCATAAATCATTTGAACAGTATTTAAAATCACAGGCTCCTGTGGCAAATATAAACTT
TTAATAGCTATAGTTGGCAATTACTTGCCAATTCCTATAAAAATAACATTAGTGGCTTATTTTTGATTGCACCTAAACA
ACTGGCATGATTTAGCCAGTAGGAGAGAAATATTAGTTGTGTTTTGCATAATTTTGTGTTTAGATCACACTGGAAATAC
AAAGTTTTGTTGTTAAAAATATTTTTGCTTTCTGAAATATTATCCCCTTTCAGATCACACCAATGAATGAAGTTTGTAG
AAAGAAAGAAAAGTAGCCAACGTAGACTCCTTTTCTGTATCAATCAAATATATGCAAAATACATAGATTTTTAAAAATG
TAATTTTAATACATTCCTTTAGAAACACATTTACTTCATGAAGAAACAGTATAATGAGTTCATTTATTGACCCAGAATA
GTGAGTTGATTTATTGAGTTTCTGTAGCCATAGACACGAATAGTAATGGTTGGCTCATTCTTAGCTATACATTCCTAAC
TGACTGTATTAGTGGGAGAAAGGAGTGCATCTATAAAATAAATATAATCCCATCCCTCAAGGTGGTCTGGAGCCCATCT
AAGAGTAAGAAGTAGTAGAGTTGAAGCTGCTTTATCTGAATCAGCTCCTGACTTCAACTCAGCTCCTCTTTTTCCTTAG
GTCCATGTGGCCCACTTGGTGTAGTATTCACATCTCCTTCCACCTTTTTATGCCTTCATTGTTTACATTACCTTGCTTG
GGCTCTTATTGAGATGAATCACATAAAAATGCTTAATTATCAAACATTAATCAGCTGCCTATATAATTCAGAGGATGTT
TAAAACCAAGGCTCAAGGAAATTCTGGTGGGTGTATACTAGGAGTATTTACGTCTTGCATCGGTACTTTCCTCTGGGAC
TTCCATCACTTCAGTTCTTCCTGAGATGCCAGAGTCATATCTCTTACTTGTGAAAGAACAGAGCTTTAAGAAATGGAGT

Fig. 9.30

CTAGAGGTGCCAGGTGCCCAGTGGACAGTGGGCTGGGGGCAAGGCATGGTGGGGAAAGCAAAAAAAATCTCCCAAACAG
CAATAGTTGATCTTTCTTCTATCCACTCCTCTCAATTTTCTAAAACCATTTTTGTCTAACTGTGGAAGTTCTTTTGCAG
ATAAGGTTCTGTAAAACTATGCATATCTGCCATAGACAGATGGATTTGACGAAAGATGTATCCAAAAAGGAATGTATCA
CATCATGAACTTGCTAAGTGTTCATGAATACACACTGGCATTTGGAGACTATTAACACTACCTACTGAAGCAAAGACAT
AAATCCAAATTGAAGAAAATATAATTTTTTGATTGAATTACATTTTCCAGTGGGTTTTTTTTTTTTTGGTGAATTTTGT
TTTTGGAAAAATTTGCTCTTCCCTCCAACGTTTTTCCTGTGTTATATATAGGACTGATTTGATTTCTTCAGCTTGCCCA
AGAATTTAATAATTCTTACTTTGTGTTTTCAAAAGAGTTGCTGTCTACCTTGAGCATGTTTTTAAAAAAGCAGAACAAA
ACGAATGAAACAAATGTCCCTCTTCCCACAGAAAAAGCACACCACCAAGGAGTTAAATGCCCTACATTTCTTTAAGTCC
CTCCTTTTGTGGAGCTAGACACTGGTAGAAGAGGAGCTTTCATTTAATTTCAAGACAATCAGTGATTCCAACTTAACTA
TAACTGTGTTCCTCTAATATCTGATTTCAAGAAGCAGAACATTTTGGTGAATTAATCTTAGAGTCAACGGGACCACGCT
CAGGCCATGAAACGTTTTCTAAGCCTCAGTCTCTATGTCTTTAAAATGAAAATAATGATATATGTTCTGGTATTTTACT
AGATTGGTGAATATCCACATCACAATGAGAAAGTGCTTGTCAAAAGAACATTGTAATGTGTAATTTGTAATGTGCTGTA
CATGTACACTATTATTATGACTGTAGCTCATCACGCTAGGGTTAGGACTCTTTACTTCTAAAACATATTCCCAGTAATG
GACAAAACTTTTGAAGCAAAGAAAATCTTCACTGTTTGATCCTAATGTTATGAAGGCTTTTGGACCTTACATTTGTTTA
AGCTCCCATTGAAGCTCCCATTGGAGCTTCAATGCTGATCCATCTATTACTTGAGTATTAAAAATACCGATAGGTTTAC
TGTGATAAACGAATGTGGCATTGTATGTGAAAACATATTTAGTAAACTTCCATGTGCCATAGTCGTATAAATATTACAT
ATTGCAACAATTATCAGTATATTAATAAAAATTCTTTGCAAATTTTCAATTTTTAAAATGGAAAGTATCAGATATATTT
CTTATTGATTGGATTGACTAACTTTCTAAGCTATGTTTGCTTCCCTCAAACAGGATGAATGTTCCTGTTGGTTAAGCTT
TCTTTCCACTTAGATACAGCACTAAGCCAATAGTTAGATAAGCATTCCTTCACAGCCTACATTTGGAGCTGCCAATGAC
GAAGTTTTAGAGGACATATTTTCCTCACAGGAAAAAGTGGGTTAGGAAATTTAGACTGACAGATGTTCTTGGGTTTTTT
TTTTTTTTTTAATTCCTGTCTTGACTCTCATTATTAAATTTTGCTAAGGAAATAATTATGTAGGTTTTGAGGTGATGCT
TATTCCTAGTAGTCTTTTCATCTCAGGGATGCAATGAATGGTCAAAATGACCTTCTGAATGATTTGAAAGATCAATTAG
CAGTTTTGAATCCCAAATTTTTAGGTGGTTCTGCTTCAGAAAATCATTATGCTTTTTGGAATAATGTCCATAGCTGCAT
CCTACATTTCAGTGGTTTCAGCTCACTGCTGTTATAGTTTGATGATTTCCTAACAGCAATATTGGTTATGCTAAAGCAG
TTCCCCATTTCACCTGTTGAACCCTTTTTAAAAGATAGAAGAAATTATAGAGGAATCACAATAAGTAAAACGTATTAAA
ATGGAGTGGATTATCTCCACTTTTATCTCACACAGCTCACCCAGAAATTCATGAGAGAACTTTCTAGGAATGAAACAAT
TTCATTTGTAGTAGTATTTGAAAACTGGATCTAGGGCCATTGACCTGACTTTTTTGTGCCTTTGGTGATTGGATAAGAA
CACTTCTTCAGTAATTTAAAACTATAGTGAAATAATGTTTTTTTTTAACTTCTCAATAGGAATTTATTTATTCAGCAAA
AATCAGGAGTTAGGTGCTAGAAACACAAAGATGAACAATACATGGTTTCCTCAAGGAGCTTATAACCTACTAGACATTT
ATTTCATGTTGGCAGAACTTTTAGGATAATTCTCAAAGAAAAAGGGTTATTATGAGGTTGCTACTTTTCTCCTCAAAAT
ATTTTCTATGTTAATAATGAAGGAATGACCAATCTGTAGTATATGCAAAAAGTACTGGGTAGAAATATATTAATTTTCT
TGGCTGGGTGTGGTGGCTCACATCTGTGGTCCCAGCTACTTGGGATGCTGAGGTGGGAGGATCACTTAAGCCTGTCAGT
TCCATGCTGCAGTTGAGTCATGATTATATCACTGCATTCCAGCCTGGGCAGGCAACAGAGTGAAACTCTGTCCCCCCACC
CACCCCCAGAAAAGAAACATAAAAATTTTCTTATAAAATTTTACTTTTTAGAGTCTCCAGCCTTATTTAATTCAGTTAC
CATATTTGACAAATAAATGGTGGAACCAAGATGTTACCAGGTTTAAGTTTCATATACAGTAGAACTGTGACAGGAACCT
AGAGTACCTGGAACTAGAATCCAGATCTCTGCCCTTTCAGTTTAGGATGTACTGACAATATATATTGCTACTTAAAATT
GCTAAAACAAAATTTATAAGCATCTATATATTTTGCAGCTAGGACAATTATCTACAAACATGATATTTAATGGAAGATA
TGGTAATAACATCTGAGATATACAATTATGTTATAAAATCTAAAATCAACAAGAAAGGAATAAAGTTGTACCATTCCAG
GAAATACATTTCCAGAGCTTTAGATATCCTTATTAGATTCTACATGTTAGTTTTGGTGATGTTAACTGCCATAACATAT
AAAATCTGAAATCTTGTTGACTTAACTGAGAAGTTTATTTCTCACTCAATCAAAGCCTAAAGTGAGTATTCTTGATGGG
CAGATTCTTCTCATTCATTCAAGCAGTGTTCTTGTGACTCCACTCTTANCACCTTGTTGTCACNACCAGCTTCCTGGTG
TCTGTGCTTTGGCAAAGGAGAAAACTCATAGAAGTCTGCTCACCTTCTATTGGCCAGAGCTTGGTCACATGGCCCCATA
TAGTGAAAGGGAAGCTGGGGCTATAGTCCTATTTGTGTCTGGGAAGAATAAAAAGTTGGTTTGGTGATTGTCTTAGTTC
AGGCTGCTGTAACAAAGTATCATCAACTGGGTGTCTTATAAACAACAGAAATTTATTTTTTTTTTACAGTTCTGGAGGC
TAGAATTCTGAGATTAGTGTGCCAGCCTGGTCAGGTTCTGGTGAGGGCTGTCTTTTGGGTTGCAAGTGGCTGACTTCTC
CTATTATCTTCACATGGCAGAAAGAGGGTGAGCTAGCTCTCTGGCTTCTTTTTGTAAAGGCACGAACCCCATTCCTGAT
GGCTCCACTCTCATGACCTAATTATCTTCCAAAGANACCATCTCCAAGCACCAACACATTGGGAATTAGATCTCAGCAT
ATGAATTTTGGGACGATATGAACATTCAGTCNACAACAATGATCCACTAAGCTATTTCTGCCATACCTTTTTTTCTTTT
CTCTTTTCTTTCCTTACTGTTCTTCAGTATGTCTATGTAGAATCTATGCCTTGTAACCAATAAGGTAATGAAAAAAATT
ATAATATTTACCATCTGGAAGAAATTAGGAAAATGATTTTACTTTTAAATTCTTGATCCATATGTTAAAAAATTTCCAA
GGCTATTAAAATATCACTGAACATTGTGATTATAGAGATTGCTATGATTTAATACTTATGTCTTATAGTGAAAAAGTAG
TCCTGGGATATTTTTCTCTCTTTACCTCACCCATCCTCTTCTATGTCAGGTATTTGAATCCCTTGCTTTGTAGTTTTAT
AAAAAGNTGGGGAGAAAATGAACAATTGTCAAGGAAGATGAAATGGCTAATCAAAATTCATTCATTCTCCATAGTTCCT
TGGGTATTTTATAAACTTTGCAGTAAATGCTAACTTCTTATTGGGGAAAACTGCTATAAAGTAAGTGTACAGGTAGGTT
TTGGAGAAATTTTTCTTGCATGGAGTTGAGCAAATGGTGCATCTAACATAAGCTTGGTTTATAGTTTCTGTTTTTCAGA
AGCTAGAAGATTTTTCTCCACTCTGAACTTCTAGGGATCAACAAAAGTATTTATATCACAAATAAAAAAAAACACAGTT
ACCTCTCAGTAAACAATTTTTTTTCAGATTATTCTATTTAAAAAATCTCTCCAAATCTGTTAATTTTCTGTTAATAAAA
CATCAGTTTCAATAAAAGTCATAAGCCTGTCAAACCAATTTTAGTCCTTTATCTTGGATATAGTAGGTTAAAATATTTT
TGTTGGGTGTTAAGCCAATAATAAACTCAGCTATTTTAACAACCAAATTATTTTCCTCCTATAAACCAAATTTACAATC
AAGCTACTTAAGAAATAAAGACAACAAATAGAAACTGTTTTAATCTTCATATCCTGACCTAAAAAATAGAAGCACGAAC
TCATGTCACATTCTCATATTTATCTGATTAGACTAGGAATGCCTAAAAAGAATTTTCCCATAACTCCATTTACTTGTTG

Fig. 9.31

TTTATTTCCCTAGCTCATTCCAAAAGCAATTTAAAATACAACACCAAAAGAGTAAAATATCCTCAATCTGACATCCTAG
CAATCTTTTTATTTTGGTGAAACTGAACAATAATAATAGGCACTTGCATTCTTCACCCTGAGGCACTGAAAACACTGAT
ATGTCTCAGTTTTAAGATTCTGAAGATTATATTCTATTTAATAGATATTTTAAGTATATGTATTATATTTCTAGTCTTT
GAACTAAGGCAGTCCACATATAGGTATAAAGTAATGCCTCAGCATAGTGTAGCAATTATTGGTGCAAAAGGTTGGTGCA
AAAGTAATTGTGGTTTTTGTCATGAAAATGGCAAGAACTGCAATTACTTTTGCATCAACCCATAACTCTGTGGTCTCTG
GAGCCAGACTGCCTGGGTTCAGATCCCAGCTCTGCCACTTAGTACCTGAGTTACTCTGGACAAACTAATTAATCTTCAT
GTACCTCCATTTAATTATCTGGAAAATGGGATAACAATAGTACCTATCTGGTTGGGTTGTTGTAGAGATTAAGTAAATT
AATATACGTAAAATGCTTTACATTTTACGTATATTAATTTCAAAATTGCTTCGAATGATGCATATCTCATAGTGCTTTA
TAAATGTTTGTCATCTTATTATTATTTGGGGAACTGATTATTTCACAAAATATATTTTCTAGATAGCTGAAGTTTATTC
AGTCAGTTTCAAAACTTCTAGATATAGCCAGTTTTCATGGGTCTTTACAAAAGGATCCCTGTATCTTTGTTTCTTCTGT
TTTAGAGAGATTAAATGGAATCTTCCTTTGGTGATACTGATTGAGGTGATACTGAGATAATTAAGAGGACATGAAGGGA
TTTAGGAAGAGTGTTTGCCCCTGCACTAACTGGCCCAGACTGCTCTACTGCATCAGCCCTCTGGCGATGTTCTAAGGGT
TTGGACTTCAGTCTACTGCCTATACTAGTACCCTTGCTTTAAAATTCCTGCTCCTATTTTGCTATAGGCTGTAAGCAAG
AAAATAGCCTAGTTTCTAAAACCTATGTATAAAATGAGAGAATAGGTGTCACTCAGGGTGTCAGTTCTCCCCTGAGAGT
AAATAAGACGTGACTGCATTTTTTCCTTCTGGGTGAGGGTTATGTTTTAGAGCAAGGGTTGGCAAACTACTACTTCCTG
TAGGCCAAATCTGTTTTTTGTAAATAAAGTTTTATTGTAACACAGCCATGCTCATTTGTTTATATGTCATCTACTGCTG
CTTTCACACACTGTAAGGGCAGAATTGAGTGGTTCCCGCAGAGACCATATGGTCTGTATAGCCTAAAGTATTTAATATC
TGACCTTTTACAAAAGAGTTTACCAAACTCTGTTCTAGAGCTTTAAAATTGGACAGAGACAGAAATAAATGAGATGTTA
CTACATTTAGTAGTCTCCACTAACCTGCCTATTCAATTATTTGCAGCACCACATCCCTTAAATGTATTTTGGAGAAACA
AGAATTTATTGCAGTAGGCTATGTTGGATAAAGAACAAACAGCCCTCAGTAGCACATTGTGAATATTAAGAGGTGGTGA
AGCTGTGATTGTCAAGCCAAGTTGTTTGGGAATCTTCATTTTAGTATTTGTTGCTCTAGTGTGATCAGTANATAACATG
ATGCAAAATTATATAGCTTTCTGTTGTGTGCTGTAGAATGTTGTTCTAGAGATACTACCAGTTGGTAGCTCCTTTTTTC
ATGCAATTATTCAAAGTAAATGTAAATATGTCTGTTGTCCTTTTCTTTTACATGAAAACTTCCCCCCTCCCCAACGCTG
TAAGATTCAGAAGCATAGTGTACAGAAAAGGATCTTGAACTTGGGTTTGAATCCTGACTTAGTCACTTTATAAAGGAGA
AACATCAAGTTACATTGCCACCGCCAGCCTCAGTTTCCTTGCCTGTAAAACAGAGGTGGGAATCCAGGCTATGCTTGCC
ACAAAAGGAGGACCAAATGAGACTCAGCATACTAGAAGGCTCTACAGCGCATATTATTACCTGTGTCTTTAATAATGTT
CTCGATTTGGTTCACTTTCTCCTCATACAAAGATGTGTATGTTTATGGAAAAGAATATACAATGGATTCTGAGTGAACT
AAAATTGTCAACTGCACTGGGTATGAGTCTGCAAGCATGAAGGAGGCTGGGTGAGAAAGCCTCTTCAAACAGCATATGT
ATTCCTCTGGTGTCTGCTTTATTATTCACTTCTCTAATGTGAAAGTTTATGCTTTAGTGCAGAGCTCCTGGGAAATATG
CAAAGAAAAAAGAAAAGATAACCTTGGAGGGGAAAAGAGGTAGTGCTTATGCCAATACAAAAGCATGAATAGAAGCAAA
TAGTTGCTGGTTTCTTTTAGCTGTAGTTCTTTAAGTGAATCTGGTATATATACAAGAAGGTAGTTAATGTTTTAAAGAT
GAAGGAAGGAATAGTTTCTTTTAATGAAAATAGACTCTAGTGCTACGGAAATGAGAAGTCCCCTGTGATGAGGCTAGAG
GAGAATTACTGAAGGATGAAGTGAACGTACGTGGCTCCATTTTGTTTTTCTTGGAGGCCATAAAGAAAACCAGACAGCT
TACTCAGTGTAAGTTATTTATACTTGTAAAAAAAATCACCCCATTTTTATAATTTAAGGGGATGCTAACGGTTCAGCTT
TGGATTGCAATTACATTAAATGTATTTTCTCATAAACTTGTTTTCAAATGTTTTAAAAAGATTTAACCAGAAAATCCAG
AATTCTTTTGCTGAATTTGTTTTTTAAATGCTTTAGATAAAATATTTTAGAATTATGACCTTGAATTTGAATTTAAGGG
ACTCCTTCAACCTCCTCTTTTAATCTCCTTTGTTATTTGGAGGGAATTATCCAAGTTGTNTCAGTTAGCTATTGTTGTG
TAACAAACAGTTCCAAAACATAGTTTTGGATTAAATGGATAAATGATTAAAAGGATAATCATGGAAGATTTTCATGAGT
CTACCAGTTGGCTGGGGAGTTCTGGTTATCTAAGCAGATTCTGATTATTTTAGCAAGCCTTACTCATGCATTAGGAGTT
AGCTGGCAAGCCAAGATGACCTTCCTTGGTAAAGTCAATGCTCCTTCCCATGTCTCTCATATCCCTCCAACAGGCTAGC
TCAGGGATGTTTTCACAGTGGTGTCTGGGGTCGAAGCATGGGCAAGTCCAGTTGTGTAAAATGGTAGTTGGCAACACAC
ATGCACTTTTCAAGTCTCTTTGTGTGTCACATTTGCTAACACCCCACTGGCCAAAGCAGTTTGTGGTGGAACTCCGAGT
CCGAGTGGAGGATTGTAAAGTTATGAGTCAAAGTGTGCATACATAGGAAGGCCATGAGTTGGGCCATTAATACACTCAG
TCTACCAGAAGTCATTTCACCTTTTTTCCTCCATCTTAACAGCCTCCCTTTTGGAAATTTAACTTTTACATACTGTGTA
AAATCAAACCAAACAAACAGAAAAATCTCAACTTACCTGGTTACTTTTCAGCACTGTTTTTAAAGCTTGGTCAGGGAGT
AAGTTGTTATTACAGGCTAAAATTAAAATTTTGCTTATTTACTTACACACTTCTCCCCTAACTCCTCCTTTTTAAAGCA
AATTGAGTTTAAGCCACAAACTGTTGAATAATGAAGTTGGTTCTTTTTCAGTTTTATTCATATCTATCCCTGAGCTCTA
TTCTGCCTCTAATCAATTTCTGTATTTTGGAGCCGCTATTACTATAGCATTTGCTGGGTGAGTCCGTGGGGTTTTGATC
ATGCTTTCATATGTTCTTGCTGTTTGATTTCCTCTCTCCTTAACTCCAGGTTTGCATTTCTTCCTGCCTATTCTACATG
TCATAGAGGAACTTCAAACTGGACGTATTTTAAAGAATACTGGTTATCCACTTTGCCCAGTCACACATACCTTCAACCA
ACAAATATATATTTGTTGAGTGACTTCCATACTATTTCAGGCATTAGTAATATACTAGTGTAAAAGTAGACAAAATGGA
GGCCATCCTAGAGTTTATAATCTAATGGGGATTGACAGACATTAAACAAATGTGTGAATACATAATTTAATGCTTGGCC
GTGATAAGGGTTATTGAGAAAATAAAGCAAGGTGAGCAGAAAGGGAATGATGGCGGAGGTGCTTTTTTTGATTAGTGTT
GAGGGAAGGCTTCTGAAGTGAGGGAGTGAGCCATGACAATCTGGGCAAAGTGTGCTGCACGCAGGGGCATTAGTGGATG
CAAGGCTGTCTGAATGACGTTTGGTGCTGCAGCAGCTGTACTTCCAATGGAAAGAAGGGTAGGAAATGAGGTGGGGGAG
ACAACAAGGGACCAGATCACGCAAGGCCTTTGTAGACAACAGTAAGCTCGTTACATTCTTTCTAAGTGCCATGGCAATC
CATTGGTGGATTTGGGGCAGGGGAGAGACATGGTCTGATTCTGGCTGCTGCGTGGGGCACAGGCTATAGGGAGCAAGGG
TGGAAGTTGGGAGGCTATGACAGTCATGGCAGGGGCTGTGTTAGGAGAGTAACAGTGGAGATTGTGAGAGGATGGCAGA
CTGTGGAGCTCTCCAAAATGTGTTTCATTTAAAGAAGCCAAATTTAGATACTGTGATCAGTTCTGCCAAGTCGAGCCTG
TGGAGAAGTATCTCCCAAAGTAGACCCAACAGACTTCCGGTGACATCTCAGTTACTTTTAGGTGCTATGTCACATGCAT
GAACTTTTAAATTTTAATAGTTACTGATGATTTTAATGTGGATTAGAAATATATAAAACTTGCATGTGAAAACTATGAT

Fig. 9.32

TTTACAGTTATTACTTGGAATGAGGAAAAAGTATTGAGTGTAGTGCAGACTTGAATGCAGAAATAGCAAAAATCTCTAG
GGTTATATCTGAATGATTGGATTTAGAACATGCTGACAGGATTATTTGTTAGATTGAGTCCTGAGGGATAGTGAAGGAT
AACTCTGGTAAGTATGTAATCAGATTTAGTTATTACCCCTTATTGATTATCTACTGAATGTCACTCTATGTTAGGCACC
TTCTATANGACATTTCACTCAGCTTTCCCTGCAACGCTATGTGATGCGGGTGGTAATTGTCTTTTTTTTTTTTTTTTTT
TCATTTAACAGATGAGAGAAGTGAAGTTCATAGAGAATAAATAGCTTGTTTTAGGAAGTCTCTGATTTTTCAGATATTA
CAAGATTAGCTCTGGTAAATTCTCTGCAAACAGGAACTTAGTCTGTTTTGTACACTACTGTCTCCTTAGAACATAGAAA
CATTTCTAGTATATAATAGACATTAATCAATACTTGCTAAATGAATGAAAGGAAAAAGAATGGTTCTTGTATTTAGATC
TTACTCAAGAGTGGTATATTTTGTTTTCCTTATTATAGAATGAGGTTTAGGAAGTAATCTCTTGGAGTTTAATGGAAAG
CCATTTTCGTCATAGGATGACTTCCTGTGTCCCCTAAGTGCAGGTTTCCCAATGTCCAGACCTTGGCCTTATATTTTTC
TCCTTATTCTCCTTGAAGGACCTGGCTCTTCTGGCTATAACTACATGTGCAATCCCCAAATCTCAGTGTTTGATCCTAA
GCTCCAGTTGTAGGATGTATAAACCCACTAACAAGCCTAGAGCCACTTTAGGGCAACATAACCTTGGCCAAGTGACTTA
ATTGCCCTTGAGCCTTAGTCTCTGTCAGTAGAAGGAAGAGATGGAAGAAGAAACTGAGCCTTGATTTGAACAAAACCTA
TGGGCACTAGAAGAAAGAAAGACAGGGTGCTTAGGGAGCATAACATTAGGGGGGAGAAGACCTAGAAAGCAAACAATTG
AATTTCTATTCCTTTTGAGCACCCTTATTTTGTTTTCTATCTAGAACTTTCTAAGGAGTTAAAAAAAGACTCTTTTACA
TAAGTTTTTTCAAAAGGCTTAAATTTATTTTTTCTTAAAAAAAGGTAAAGTATTGAAAATAAAGCCATTCAAGCATTTA
GAGTCCTGGAGAAGCTCTAACCTGCAGCTAGAGCAGCTTCACACACATCCTTTCGCTGCCAGCAGCAGCTGCACAGAGC
TTGCTGGAAGGTCTGAGGCAGGGTGTGACAAACTGACCTGACTGAATGAAGGGGCTTCTGGAAAGGGGAGGAGCTCCAT
ACAGGAACATTGTTGGGGGTAAGGTGAGCCTGTGGAGGATGTCTCTCCTCTCTGCCTTTCCTTGCAGAGCTGGGAGCTG
TGGAGAGTGGAAAGTGTGTCTGAATGACTTCGCATGTTTAGTGAAGCTCATTGCCAGAACTGCGACTTCCCCTGTTGCC
TTGAATCTGCTGATCAGCCCTGGCAGCACACGTTTTTTAAATTATTTAAAAAGGGACAAGGGTTATAAAGATGAAAACC
ACATTTTTACCAGCCTCTGCAAACTCCTAATTTGGTGGGTGAAGGACACATCAATGAAATTTCCAGTATAAGGAGTGGA
GGTAAGTGCTATAGTCTGAATTTTTGTATCCCTCTCAAATTCATATGCTGAAACCTAATCACCAAAGTGGTGGTATTAA
GAGGGGGTTTGGGAGGTGATTAGGTTGTGAGGGCTCTCTCTCCATGAATGAATTAGTGCCCTTATAAAGAGTCTTGAGG
GAGCCTGTTTGCCCCTTCCATCATGTGAGGACACATAGAAGGTGCTGTCTATAAGGTATGAGCCCTCACCAGACATTTA
ATCTGCTGGTGCCTTGATTTTGAACTTCACAGCTCTCAGAACTATAAGCAATAAATTTCTGTTGTTTATAAATTGCCCA
GTCTAAGGTTTTTGTTATATATATATATATATATATATATATATATATATATATATATATACACATATATATATATGGCAG
CTCAAAGGGACTGAGACAGTAAGCCAGACACAGAGGTCAACACCTGCCTTGGGAAGATAAAAAAATTCCAACTGGGTGG
ATCTGAGTGATGACTTGGAAAGAATAGGATTCAAATTAGGCCTTGAGGCAAGGATGTGACTGATGCTTATCTTTAGGAA
AAAAAGGTTGTTTTACTCTAGGTAAAGGAAGTAGCCTCTTCAAAGGCTTTGAAGCAGAATAATGCGGCGGGCGGGGGCT
GGGGTGGGGTCAGGGGGCATGGTACATCAAACAGTGGGGAGGGTGTAGAGTGCATAGTGTTGGGAAGAACACCATGAAA
TTGGAATGACAGAGGTGAAAGCATATGGTAGTATGGTTTGCATGCCAGATGAGCTCTTTGGACTTTTTGGGTTGGCATG
GGGAGCCATTGACACTTTGGTGAGAGGATCTGAGGAGTGGAGTGGCAGGGGAAGGCCATCATCAGCTCTGTGTGTGCCA
GGGCAGCAAGATTTGTTAGCTTAAAAAAACTTTTTGAAATAATTTTAATTTAGAGGAAGTTGCAAGAATTGTCAAAAAG
TTTTAGGATATTCTTCATCTGAATTTACCAATTGTTAACATTTTGCCACATTTACTTTATCATTCTCTTGTTCTTTAAC
ATATACATATTATTAAGAGCACTTTTCTAAACCATTTGAAAGTAAGTTGCAGACATCATACCCCATTACCCCTATGTGG
TAATATCTAATATCTGAAGTCTGATCTCCAAACTTTATTCAAATTTCACCAGTTGTCCCAAAATATAGGAGGTCTCTTT
CTCCCTTTCTTTCTTCCTTCCTCCCTTGCTTCTCTGCCTCCCTTCCTTCCCTTCCTTCCTTCCTTTCCTTCCTTCCTTC
TTTCCTTCTTTCTTTCTCTTTNTTTTCTTTCTTTCTTTTTTCTTTCTTTTTCCTTCCTTCCTTCCTTCCTTCCTTCCTT
CCTTCCTTCCTTCCTTCCTTCCTTCCTTTCTTTCTCTCTCTCTCTTTCTTTCTTTCTTTCATCTCTCTCTCTCTGTCTC
TCCCTCCCTCCTTCCTTCCTTCCTTCCTTCTGTCTGTCTGTCTTTCTTCAGATGCTCCTCANCTTATGATAGGGTTATG
TCCCAATAAACTAATCATAAGTTGAAAATGCATTTAATATGCCTAACCTATCAAATGTCATAGCTTAGCCTAGCCTACC
TCGAATGTGTTCAGAGCACTTACATTAGCTTGCAGTTGGGGAAAATCACCTAATGTAAATCATGTAATAAAGTAAATTA
CATAAATATTTCATGTAATTTATTGAATACTGTACTGAAAGTGAAAAAAGTATCCAAAATATGGTTTCTACCAAATGTG
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CAATGAAATAGGCTTGAGTGGAAGCACTGACAGTGAGAATAAGACAGCCATTTCAGAGTTGAACACAATAAGATTTGGC
AACAATGGGCTTTAGGGTAAGAGAGGGAGTAAAGCTGGTAATGAGGTTGTAGTTTACAGGATTGATGTCCTTAACCAAC
AAGGATCTCAGGAAAGAGAATCGAAGTGCAAGGGTGTGCTTATGTTTCAGATTTTTCATTTAATAATAATAATTAGATT
TCTATAGTGCTTTCAAAGGCAGAAAGGCAGTATGATTGGAGGCAGCTTATGGCAGTGATCAAGAGTAGGAACTCCGGTG
CTAGACTGTCTGGGTTGGAATCAGGCTTTGCTGCTTATTAGCTGTGTGACCTGGGAAAAATGACCTAAGTTGGCTGTGC
CTCAGTTTTCTTATCTGTGAAATGGGAATTTTAACATCGTTTCCCTCACAGGATCATTGTGAAGATTAGATTAGTTATT
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AATTGGGACTCAGGTGTTACATGGTTTGCCCAAAACCATATAACTATCGGTAAAAATGCTCATTCTGTTCCACCTACCA
GACTATCCCCGGGCTCGCTACATGGGGATACCTAATAGGCCATAGTAATGGGCTAGTGTCTCAGCATAGGCATACTTTG
GGAGTATTGTGGGTTCAGTTTCAGACCACTGCAATAAAGTGAATATTGCAATAGGGCAAGCCATGCAAACATTTTGGTT
TCCCAATGTATGTAAGTTACATTTCTAGTATACTGTAGTTGATTAAGTGTGCAAATAGCATTATATCTAAAAAAAGTAC
ATACCTTAATTTAAAAATACTGGTTGTTAAAAAATGCTAATGATCACTGAGCCTGCAGCAAGTTGTAATTTTTTTGCTG
GTGGAGAGTCTTGCCTTGACATTGATGGCTGCTGAATGATCAGGATGGTGGTTTCTGAATGTTGGGGTGGTTGTGACAA
TTGCATGAAATAAGACAACAATGAAATTTGCTACATCAATCGACTCTTCCTTTCATGAAATATTTTTATGTAACATGCA
GTGCTGTTTGATAGCATTTTATTCACAGAACTTTTCAAAATTGCTGTCAGTCCTCTCAAACCCAGTTGCTGCTTTTTAT
CAACTAAGTTAATGTAATATTCTAAATCCTTAGTTGTTACTTCCACAATGTTCACAGCATCTTCACCAGGAGTAGATTC

Fig. 9.33

CATCTCAGGAAACCACTTTCTTGGCTTATGTGTAAGAAGCAGCTCCTCAAATCTTCAAATTTTATCATGGGATTGCAGA
AATTCAATCACATCTTCAGGCTCCACTTCTAATTCTAGTTCTCTTGCTATTTCCACCACATCTGCAGTGACTTCCTCCC
CTAAAATCTTGAACCACTCAAAGCCATCCATGAGAAGTGGAATCACTTCTTCCAAACTTCTGTTAATATTGGCATTTTG
GCCTCCTCCCATGAGTCATGAATGTTTTTAATGGCATCTAGAATGGTGAATTCTTTCCAGAAGGCTTTCAACTGACATT
GCTCATATCCATTAGAGGAATCACTGTTTATGGCAGCTACAGCCTTACAAAAATATATTTCTTAAATAATAAGCCTTGA
AAGTCAAAATTACTCCTTGATCTATGAACTGCAGAATGAATATTTTGTTAAAGGCATGAAAACAATGTTAATCTCCTCG
TAGTTCTTCATCAGATCTCTTGAGTGACTAGGTGCATTGTCAATGAGCAGTAATATTTTGAAAGGAATCTTTTTTTTTT
GGAGCAGTAGATCTCAACAGAAGGCTTAAAAAATTCGGTAAACCATAATTAAACAGATGTGCTGTCATCTAGTCCTTGT
GGCTCTATTTATGGAGCACAGGCAGAGTTGATATAGCGTAATTCTTAAGGGCTTAAGGATTTTTGGAATTGTAAATGAG
AATTGGCTTCAATTTAAAGCTACCACCTGTATTGGTCCTTAACAAGAGAGTTAGCCTGTCTTTTGAGGCTTTGAAACTA
GGAATTGACTTCTCTTTAGCAATGCAAGTCCTAGGTGGCATCTTCCAATATAAGACTGTTTTGTCTAGATTGAAGATCT
GTTGTTTAGTGTAGCTACCTTCATTGAAAATCTGTTGTTCAGTGTAGCTACCTTCATTTGTTATCTTAGCTATATTATC
CAGTTCACCTGCTGCAACTTCTTCCTCAGCATTTGCTGCTTCACCTTGTACTTTTCTGTTATGGAAACAGTTTATTTTA
TTAAACTTCATGAATCAATCTCTGTTAGCTTCAAACTTTTCTTCTACATCTTCCTTACCTCTCTCAGCCCTTGTAGAAT
TGAAGAGTTAGGGCCTTGCTCTGGATTAAGCTGTGGTTTAAGGAAATGTTGTCACTGGTTTGATCTTCTATTCAGACCG
CCCAAACTTTCCCTATATGAGCAATAAGGCTGTTTTGCTTTCTTATCATTCATGTATTCACTGGAGTAGCACTTTTAAT
TTCTTTCAGAACTTTTCTCTTACATTCACACCTTGGCTAACTTGCACAGGAGCTTTTGGCTGTTCTTGGCTTTTAACCT
GCCCTCCTCACTAAGCTTATTCATTCCGAGCTTTTGATTTAAAGTGAGATATGTAACTGTTTATTTCACTTCAACACTT
CAAGGAAATTGTAGGGTTATTAATTGGCCTAACTTTTAATATTGTTGTGTCTCAGGGAGAAGGAGACCTGAGGAGAGGA
GAGATTTCTGGGAAAAGCCAGTCAGTGAAGCAGTTAGAGAATACACATTATTCATTGATTAAGTTCGCCGTCCTATATG
GGCATGGTTTGTGGCATACCAAAACAATTACAACAGTAGCATCTGAGATCACTGATCACATATCACCCTAACAAATATA
ATAACAATGAAAAATTTTAAATATTATAAGAATTACCAAAATGTGACAGAGACATGAAATGAGCACACATTGTTGGAAA
AATGGTGCTGATAGACTTGCTCAACCAGGGTTGCCACAAACCTGTGATGTGTAACAAAACACAGTATCCGCAAAGTGCA
ATAAAGCAAAGTGCAATAAAACAGATAAGGGCTGGAGGCTCTGGAGTTGAAAGCCCTCTACATGGAGATGATCATTGAA
GACATGTGATGTATGCAGNCACTAAGAGAGAAGCTGTAGAAGAAAAAGCTGAGTGTTGGAGAATGTTGCCTATGGGGTA
TGAAGATGAAGGGGAGCTGGTGACTGAGACTGGGTAGGAGCAGTCAGAGAGGTAGGAGACAGAACAGGAGGGGGTGGAG
TGAAGGAAAGGAAGAAAAGTAAGGGCTTAAGAAGGACTTGGCCATTCTTTACACAAACAAGGCAGACAAATTCAGAGCA
GAGACCTGGGATAGTGATGAGTGGGTTTCTTAGTGACCATAGTGAGAATGGTTCATTGGCTTGGTGAGGACAGATGCTT
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GAGGTAAAGGCAAAGGCTTGAAGATGCAGGAAATGGTGGGGACGATGGAGAGAGCTGGCAGGGATAGAATCAGGAGCAT
GGCTGGAGGGATTGGTCTCAGGAAGAAATAGAGACACTGCTTCAAGATTGGAGGGAAGGCTGGGCACAGTGGGTGGCTC
ATGCCTGTAGTCCCAGCAATTTTGGAGGCTGAAGTAGGAGGATTGCTTGAGTCCAGGAGTTCAAGATCAGCCTGGGCAA
CATAGTAAGATCCCCATCTTTGCAAAAAGGAAAAAAAAAGTTAGCCAGACATGGTGGCACATGTTTATACTTCCAGCTAC
TTAAAAAGTAACCCTGACTCTTAAAAAAAAAAAACTGAAGGCAAGAAAGAGACTGTGTGTGATGACCTATGACATTTCAT
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GAAAGTTAGAAGTATATTTGAGAATCTGAAAGGGCTTGAAAAGTTAGGATGTAGACTGGGCATGGTGGCTCATGCCTGT
AATCCCTGCATTTTGGGATGCTGAGGCAGGTGGGTTGTTTGAACTCAGGAGTTCAAGACCATCCTGGGCAACATGGTAA
AATCCCATCTTTATTAAAAATATAGAAATTAGCCAGGTGTGGTGGCACTCACCTGTGGTTCCAGGTACTCAGGAGGCTG
AGGTGGGAGAATTTCTTGAGCCCAGGAGGCAGAGGCTGCAGTAAGCAGAAATCATACCATTGCACTCCAGCCTGGATGA
CAGAGCAGGACCTTGTCTCAAAAAAAACAAAAAAAAAAAAAAAAAAAGAAAAAAGAAAGAAAGTTAGGATGTGTATTAGA
GATGAAAAAGGGGACTGTCCAGTGAGGGAGGACCAGCATTTGGACTGGTTGAGTGGCTTGGTTCTACAAGGTATTATCA
TAGGACTTTCCTTAGTGACTGATATGGTTTGGCTCTGGGTTCCCACCCAAATCTCACATCAAATTGTAATCCCTATGTG
TCAGAGGAGGAGCCTGGTGGGAGGTGATTGGATCTTGGGGGTGGATTTCCCCCTTGTTGTTCTTGTGATAATGAGTGAG
TTCTCACGAGATCTGAGTATTTAAAAATGTGTAGCACATCCCCTTTCTCTCTCTCCTGCTCTGCCATGCCAAGACGTGC
TTGCTTCCCCTTCACCTTCCATCACAATCATAAGTTTCCTGAGACCCCCAAGTCATGCTTCCTGTTAAGCCTGGGGAGC
TGGGAGTTAATCGGACCTCTTTTCTTCATAAATTACCCAGTCTCAGGTAGTTCTTTATAGCAGTGTGAAAACGGACTAA
TAGAGAAAATGTGACACCCCAGAATTAAGGCAGAAGAAATGGATTGGGCCAGTGTAAGNATGGCTTTTAGTGAAAGGTT
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CTGAACAAGGTTCCTGTGAAATATCCATAATGACAGAGAAGAAGGAAAGCACATTTCTGGGGCTCCAAGTAGCCTCTTA
GAAGTTGGAAAATTCTCAAGTCTTAAGTTTTAACTTTAAAATATTTAAAATTCCAGGGCTGGGCCTGGTGGCTCATGCC
TGTAATCCCAGCACTTTGGGAGGCTAAGGCAGGCAGATCACAAGGTAAAGAGTTCAAGACCAGCCTGGCGAACATGGTG
AAACCCCGTCTCTACTAAGAATACAAAAATTAGCTGGGTGTGGTGGTGTGTGCCTGTAATCACAACTACTCGGGAGGCT
GAGGCAGGAGAATAGCTTGAACCCAGGAGGTGGAGGTTGCAGTGAGCAGAGATCACGCCACTGCACTCCAGCCTGGGCA
ACAAAGCAAAAATCCATCTCAAAAATAAATAAAATAAAATAAAATAAAATAAAAAAATATTTAAAATTCCAGTGCNGAT
CTGTTAAAATAAAGTAGTAGATGCTAGTAGGTGATTGATTTCTCAGTAAATAGACACCTAAAATATATATGCCATATTT
TTCCATGACAAGGGCCTATACTGGGTGGGGGTGGGCTGGGAATTTGTATCCCAGTTTAAGAAGACTGGAAGAACAAAGA
AAAGTAAGGGCAAAATCAACTACTGAGAACAACGAAGGGGCAGGATAAATTCAACAGGAGGGAAAGAGTAGGAAATGTT
GAAAAATTTGAGACTGGCAGATCTTGAAAATGAGACAATCCTAGTTGATAATGAGCTCCAAAGTGTAATCAAGAAATCT
TCCAAGTGATGGAGATAAAGAGATGGAGGCTGTCTTGGGTGATTTCAATCTCATTGAATTGCTCCTGACTTAGATTCAA
TACAAAATTTCTCTCTTGTGGTGCACAGAAAAAAATATTAATGTTTAAAAAGATGCATTTGTAAAATGTTAAGCCAGACA

Fig. 9.34

TTTATTTTTAAACATTGTCTTGAAGTCAGAGAGAGATTAATAGAGCCATTCTAAATTTTCTTAGGGAACATATTTGGTA
TCTGCCTCCTGTTGTACAATCTCTAAGAAAAGTGAGAGCAAGAAGAACTATAAAATTGAAATGCCAATTGTGATATCAA
GTAATTTTTAAATGAATGCATCTTTCAATTCATTGATAGGATAAATCCTTATTTACTTTATCCGTGAGGGTCTCTGTCT
TGAACAACAAGCAGCCAATTTGTGGAATTAGTGGCTGTTTCAGGAGGGTAAGTAACCTCTCATTTATGACCATCTCGTT
CCTATGTTTTAAAATAAGATTGTGGACAAATACTTCCATTCAACCTAGTAGATGCATTTTGGCAATGGCAGATCACCCA
AACAATGGATAACAATAGCAAAAGAAATGATATAGTCAGAAGTCTAATGTTAGCCATTTGTTCCTAGAGTTTCGAAATA
CAGTCAGTTCCCAACTCATGATGGTTCGACTTAGAATTTTTCAACTATTTTTATGATGGTGTGAAATTACATGCATTCA
GTAGAAACTGTTCCCTTCCTGTTGAATTACTCTGTCCCTTCATTGTTCGGTGCAGTTGATTTTGCTCTTCCTTTTCTTT
TTTTTTTTTTCACTTTCACTGCAGCATTTAAAATTACAAGAGATATTCAGTACTTTATTATAAAGTAGGTTTTGTGTTA
GATGATTTTGCCCAACTGTAGGCTAATGTGAGTTTGGAGCATGTTTAGGTAGGCTAGGCTAAGCTATGATTCTTGGTAG
GATAGGTATATTAAATGCATTTTTGAATTAATGATATTTCAACTTACAATGGGTTTATTAGGACATAATCCCACTGTAA
GTTGAGGAGCTTCTGTAATTATAATATCAGATATTGATAGCTTCCATTGGTAAGTAACTTCAATATTTCCCACTCTTTT
TTTAAAAGCTTGACGAGCATACAAATAATAAATAATTAATGTTTCTAGTAGAAAAGAGGTAAGTAACAGGAACAGAAAT
CTTGGACCATCTTAAATGAACCAATGGGAATGTCACCATGCACATCCTTCCAAACTTTGTTTCAAGCTATTTCATGTCA
AATTTATGCTTATACAAGTGGAATAATATGTATGTTATGTCTTATGTTTTAAGGAAGTCTTGACTTATGGAGGGTGAGC
ATTTAGTCTCACTTTTAAACTAACTTAGGAAAATGATCTAAAGCATAGTGAAAAGAACAATAGAGCAAGAGGAATGAGG
TGTTAGTTTAATGAAATAGTTTAGTGAAATAATGCCAAGGACTAATATATTGAAGAGATATTTCTTTAGCTTGGCATAT
TTCAGGAAGCAAGCGGGTGCATTTAATAAATTAAATTTTTATTTAATTATTTATTTTTATTTATTTATTTTTTTAAAGA
TGAAGTTGTGCTGTCACTTAGGCTGGAGTGCAGTGGTGCGATTATAACTCACTGCAACCTTGAACTCCTGAGTTCAAAC
AATCCTCCCGCCTCAGCCTCCCAAATAGCTGGGACTACAGGCATGTGCCACCATGCCTAGCTAATGAAAAAACAAAAAA
AAGTTTATAGAGATGGGATCTCACTTTATTGTCTAGGCTGGTATTGAAATCCTGGCTTCCCACCATCCTCCCACCTTGA
CCTCCGAAAGTACTNGGATTACAGGTGTGAGCTGCCATGCCTGGCCTGGCCTTGCTTTTTTATTTTTTAGCTTTTATAG
CTCCATATCCTCTAATGCCACCACAGTATGATGAGTGGAAATTTGGGTACCATGTTTAGCACTGATTTTCTCTCTTGGC
GAGGAGGCACCACTATCACGCTATGTTGAGTTTTTGGCAGCCAAGATCAGAGGGACTGTCTTGTAATGGCCCCATCCCT
GAGATCTGTGGGAATAACACAGGAGACAGGCACTGACTGCTTCCAGGGGAAGCAACAATCAGTGCACTGAATGCCTTAC
CAAGCTGAGTATCGCTGAACTTCAAAACAGTGCCAGAGGAGTAGAGTTTTTTTAACTTCCTCTGCTCTGTCAACAGCTG
ACTTAGCTGATTTTTGCCTGTGATGATAATATCCAGAGTGATGACTGGATTCTCATAATCTGCTTCTCTACTGTTAAGG
AGGGATTTTTACCTGATAGCATTTCTCTAATTTTACTTATTTTATTAATTCTTCTATGCCAATTACTTATAAATTTTGG
CTTATTTCTGATCACACTATACCATTTGTAAAACATGAAATTCAAGTTGATTGATTGCTATAATTTTCTCCCATCCATA
TTCTGGATGAATCAAAGATGAGGCTGGCAGTGTTTCTTTCCCTTTGAAAACACTTGGTTCATTTTCACAAACAGAAAAA
TTACATGGCTTCCTGGAGACATTGATTTGTTCTTCTGGAAGGGTTGGACCTCCATTGAGAATCACTAATTTAACAAAAA
GCCCACAGATCATTGTATGAGTGTGTGTGGGATGGGGAGGGGGAGAGAGAGAAAGAAGGAAAGAAATGGGTTAAAATTT
CATTTTAAGGAATCATTTTATTGTTGGATTAGAAACTAAAGACTGTCCATAAAAAAGAGGAACCATTCTAAAATTTTCA
TAACTTGCTGTATGTGTGTATTTTATTTCTTAATAAAGCTCAAGTAGTTTCTCATGAAAGTCAATGGATAGAGAGCCAT
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CTCCATGGTGTTGGGCAGCACATCTTCAGCTCTTTCTGGGAAGACCTCAAAGTAGGAATAGACCAAGAAAAACAGCAAG
AGGGCATGACTGCATGCTGGTCAGATGGAATTCAGCCTGTACTGCTCTAGCAGAGCTTCTCCAGGGGTTAGAATGTTTT
GCTTTTATAGTCATCTGGATTGTTTGTTTACTAAGGGTAGAAAGGTCCCAGCCTCACCCAAGACCTCCCGATTCAGTCT
CTGTGGGGAGCTGCTTGGGAATCTGTATGTTAGAGAAGCTCCCAGGATAATTGTGATGTGTGGTCATGTTTAAGAGCTG
CTAGTGTAAATAATGGTGAACAGTAGCACTGGCTGGAAGCACTGTAGAAATTGTGTGTGTGTGTGTGTGTCTGTGTGTGTC
TGTGTGTATTGTGCAAGAGCTATGAGATAAGATCAGGCTACTGGAATTTGCCAAGAAGCAGCACGGGAGACACATTAAC
TAGACGCCAAGGATGTGGCCATAGACTTTCCTAGAAACTCCCTCATCTAGGGTGTGCACGTCTGGATTGCACTGACTAG
TCCTGATTAAATCCTGTATGCATAGGCTCAGTGCAGGCTGGGCTCCAGAAAAGGCCATCCACAATGTTTTCTTTTAAAA
TTCCATATACTATTTATCTTTGATTTTCTACCTCCTGCAGGAATCCCTAGATCCAACTTTCTTTGGTGAGTTTGCAGGG
GTTTCTGATGGTTCTCTTGTTTCACGGGTTTCCTTCTTATTTTCTACTCCTTTTATTTGGAATGTCAACCTACAAACTT
AAAAGATTGAGCAAACTTTGTAGGAAAACTACAGAAGTTGGAACCACATATGATGCTTTCTATTATATGCCCAAAGTCT
GTTGTATATGATGAAAATGAGGTTTTATTTACTTCTTGGTACACCAAACACAAACACTCTCTAATGAGGAAAAGAACCC
AATGAGGGGGAAAATGCTGGATGCCAATGGATGGCAATGATTTATGGAACTCTGGGCTCAGTGGTAGTGAATGATCATC
TTAAGGGAAGACACTATTCTACAGTTCGGTGTAGCTGGGATGACTTTATATCCTAGTTTGCAAGACAGTCCTGGCCTCA
CCTGTTGAGCTGGTGTCCCATCTAGTTAAGATACCTTTCATGCTCCCCAGTGTCCTGGTTGAGATACTCCGTTTATGTG
GTCACCGTGAGGATAGGAAACAGAGAGAGGAGATTTTTCTTTGGATCACTGAATAGTACTCATTTCATTATATGATTTA
TCCCATTCCAGGCTCACCCCTAACATTTGAGGGCCCAGGACAAGACCCCCCTATTCCACAACCTATTCCTTCTCTTCTT
GCCCTGGCTCCACTGTGCAACTGGAGGATCCTTGTAAGAATGTGTGTGGGTGAGCCAGCCTGCTCATTCAACTTTATTC
ACACCCACATCCACTAGCTGCCCATGAACACCCCTCAGGCCTAGGGGTGCGCACACCTGTGAGTTGATCTGCTTCGGGA
GGGTGAAGACACACCCAGGCCCTGGAAGCTGGTTTCGGACCACTTGGGGCAGGAAATTCAAGGGTCATGAGTACTTGGG
GAAGAGTCTAGAAGGGAAGTTGTNCCTGCAGGTGGGTATGTATCACAGCCCTGCAGACTGCTGGTTCCATGGAGAGGCA
TGGCTGGAGAAGGGCAGGAGAGGGCATTCTGAAGCATCAGCCCCCTGATTAGGGATACCTGGCCCTAGAGTGGTCCTGG
CCTTTTCACTCCTGCTTTTCAGAGATCCTGCTTCTAACACATCCTTGAGCATCTCAGTAAAGCAAGCTTCCTATGCCAT
TCTGAAGTGTTTGGGTTAAGAACGTTTCTCATGTGAATAATGCTTGGTCACCAGACTGAGGTCCAGCGTATTCTTCATC
TGGTCTGATAGAAATCCCTTGTCTTTAAATGTCATATATTTAAGGTAACAACTCTATTTTGTAGGTTGAAACAAAAACT
TAAACTGTATCAGTTAATGTTTTTAAAGTCAACCAAAGGGAAGGCACCTCTTCCCAGTGTGTTTCATCAATTGAAATCT

Fig. 9.35

GGTGAATGTTTTTTTGTTTGCTGGTATGTTCCACCATGTGTGTGAGCATGAAGGTAGGAAAACTGTTTGCTCAGCCATT
CCCTCTGTGGTTTGGTTTGTTGGAGAATCAGTCAAATGGAAAGGCTTTCCTCTGATGTGATTACAGAATCAAATATTTT
ATAATTCCCAGATACTTCTGAATCTTGAATAATTATTAAAGTCAGTGAACACTTTCTCTTTCTTTTCCTTGACTCCCTT
TGGATTGAACTAGCCCGCAGGGCAACACAATATTATTTCCCTGGGCTAGGTGCACTTTCCTCTTCGTGGACTATTGGGT
GCCTGTAGATAGAGTCCCTGTGCACAGCAGGCAGATTGTGCACCGCATAGTCCTGGAGGTAAATTTCACCAAGAGTATA
AGTGGGATTGTGCAAAATGGTAGCCCTGCCTATGCATGTTTGGGGCAGGGATTCCCCCCAACTGTGTATTTCCTGGGAG
GCCTGATTTTCCTCCTCTTTCTGTCACCCATCATAAGCATATGGAGAAGATGGATGTTTGAAGGGAAAATAATGTTATT
TTCTGCATTTTCTCCCATTTTTTGAGAGCACTCATTCTCCTTCTAATATTAATTTAGATCAGGGAAAATAAAAGCCATT
TGTTAAAGAACTAACTATTATATAATAAATTATCAAACAATTACGCCAAAGGTATGTTTACAAACTCCTGTTCTATCTT
GGTGGGTTGATTAGCTTCCTTGGGGGGTCCAAACAGCTATGGCTTTTCCATTTTTATAAATGGTTCTGCATTTATAAAA
TTAAGAATGGACATTTATGCTATTAATTAAGAATGGAATTAATAGTGTAAAGGGATCCTTCAAATACCCATGTGTTATT
GCTCAATTTTAACCAATAAATCTTATACCAGAGTGTTCTGCCTGCTTCCGGATGAGCAAGGAGACTTGTGGTCTGGTTC
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CTCTGGGACCGGAGGAGACATTGGCCTCTGCAGGCTTGCTGAGGAAGGGAGAAAAAGAACAGCAAGAAGCAATTGAATG
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GACAAACTCTGCCAACCATTTTTTCAGAAGATGTCAGAATTGATCGCCAAAATCCCAAATTTTGGGGTAACAACATTTG
TCAAGCATCCACAAGTGTCTGCCCTGCTGGAGGAGGATGAAGAGGCACTGCATTATTTGAGCAGAGTTGAAATGACAGA
ATTTGAAGATATTAAATCAGGTTACAGAATAGATTTTTATTTTGATGAAAATCTTTACTTTGAAAATAAACTTCTATCC
AAAGAATTTCATCTGAATGAGAGTGGTGATCCATCTTCAAAGTCCACTGAAATGAAATGGAAATCTGGAAAGGATTTGA
TGAAATGTTCATCTGGAAAGGATTTGATGAAATGTTCAAGTCAAATGCAGAATAAAGCCAGCAGGAAGAGGCAGCATGA
GGAACCAGAGAGCTTCTTTACCTGGTTTACTGACCATTCTGATGCAGGTGCTGATGAGTTATGAGAGGTCACCAAAGAT
GATATTTGGTCAAACTCATTACAGTACTACTTGGTTCCCGATATGGATGATGAAGAAGCAGAATGAGAAGAAGATGATG
ATGATGATGAAGAGGAGGAAGGATAAAAAGATACTAATGAAGAAGACAATGAAGATGAAGGTGAAGATGAAGATGATGA
TGAAGGGGAGGAAGGAGAGAAGGATGAAGGAAAAGATTACTAGAACACTGATAGGTTCCAACTTTCCTGTTTAAAAATT
TTTCTCCAGTCCCTGGGAGCAAGTTCCAGTCTTTTCTTTTTCCTCTTGTGCTCTGTTGCCCTGTTGTTGAGGTCTCTTT
GCTCTACACCATGGTTCTCAACTTATTGCAGAATACAATGGGAAAAGTGTCTCTACGCCTTTCTGTTTGAAATTCATTT
TTATCCCTTTCTGTCTGAACAAAAACTGTATGGAATCAACACCACCGAGCTCTGTGGGAAAAAAGAAAAACCTGCTCCT
TTCATTCTGCTGGAAGCTGGAGGGTGCTAGGCCCCTGTGTAGTAGTGCATAGAATTCTAGCTTTTTCCCTCCTTTCTCT
GTATCTTGGGCTTAGAGAGTACACGGTGTCTCTATGTGAATATGGACAGTTAGCATTTACCAACATGTATCTGTCTATT
TTCTCTTGTTTAAAAAAAGAAAAAAACTAAAAAACAAAATGGGATTATAGAAGGTCAGCAAAGGGTGGATCTGAGATGT
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TAGTTTAAGATGACACTTTTAAAATAAATTATCTCCTAATGATGACTTGAGCCCTGCCACTCAAAGGGAGAATCAGAAG
AACCTGTAGGATCTTATTTGGAATTGACTTTCTCTATTGTAATTTTGTTCCTGCTTATTTTTAAGTTTTCTTTTTGTTT
CACTGTAAAGGAAAGATGATGCTCAGTTTTAAACGTGAAAAGTACAAGTTGCTTTGTTACAATAAAACTAAATGTATAC
ACATACACACACACACAACACACACACACACACACACACAAACTTATACCAAAATCACACCACTTTAGTTAGTTGTCCA
CTGGAAAGGTGCTCTTTGTTTTCGAGCTTCAAAGAAGCTCGTCTTCTTTTATTTGACTGTCGCTAGGGACTCCACTGAG
CAGGAATGACTATTCTGATATTTGCTTGTTACATTTTTGGTTTTCAGAGGTGGCATATTGAGGAGGTGCACTTATGGAT
TGCAGCATAAGTATCCATGAGTCCGGGTGTGGTGCGTGTGCTCACTCATTATCTTGATGTGCTGCTCACTACCACGTCT
CTCCTTTACACTATTGGAAACTTTCATTCTTAATAATTTAATTTATCCCTAGTGACTCCAGCCTCCCATGACAGACTAA
AAAACCAGACTTGATGAAGTCCAGATATATTTTAATTCTCTTCTATCAAGCCCAAGGGAGAATTTCTTAGCGACTATGC
TGACTTATGTCTTGAAAAAACTTTAACTTTGGGAATTTTGATGTATAATGAAGCCAGGAGAGGGAGACGTGTCATTCCA
AAATGCTGCGAATAGAATTTAAGCAAGCAACATGACACACATTCTTTGTTTCTTTTGCTTTTTTTTTTTTTTTTTTTTT
TTTGCAATGAAGTCTCACCCTGTTGCCCAAGCTGGAGTGCAGTGGTGTCATCTCGGCTCACTGCCATCTCTGCCTCCTG
GGTTCAAGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGACTACAAGCATGTGACACCATGCCCAGCTAATTTTTT
TGTACTTTTAGTAGAGATGGGGTTTCACTGTGTTGGCCAGGCTGGTCTCAAAATCCTGGCCTCAAGTGATCCACCCGCC
TTGGCCTCCCAAAGTGCTGGGATTACAGGTGTAAGCCACTGCACCTGGCCATGACACATATTCTTAGCTATTCTCCAAA
AGGGAGAACACTAGAAAAGTGGTAATTTGAAAATAGAAACTGTCCAGTAGCAACTGGATGGCTCATAGCTCCAGTGGTT
CTAATAAGCGCTCAGTGGAGAGTCTGATACATATTAGGTGCTCAAGAAAATATTTGTTAACTGAATAAACAAATCAATC
GGATCTTGTTCAGAGAAATTCCAAAGCAGAGAATATCTGCCACAAGTGCTCACATCAACCATGCCTATTAAGCAGCACC
ATGTTGTTTGCTCTCGCAGAAAGGGATTTGATTTGGCATTTGCTGAAACAGGCCCCCATCTTACAGACGGCATTGAGAC
TCGGAAGAGTTAAATAATTTCCTCACAGCTACTAAGCACTAGAACTAGAATAAGAATGTGTGCTTTCTGACTCTGAGTC
TAGGATTCTAGGACTTCAAGGGTTTCCTATCTTTTTGAAGTCATGGGGCAGAACAATATAAAGGAACAGCTGGAAAAAC
TGAAATGAAATTACTATTCACTCTTACATAGGAAGAATAAAGATAACTCTTGAGGGCCCTGATATATTATAGTAATAAA
AACAAGACTGAGGTAGCAGAAGCACATGGACATGCAGGGAACACTTCCAAACATCCTTCAAAAGGCCTAACTTCTAAGG
ACAGGAAACATGAGGAAGCAGAGAAGGAAGGAAATGTGTCTAAATTCTTCCAAGCTGTTTCTTTTACTATTCAGGCCAA
GCCTTCTATCTCTTAAATCAAAATTTCAGGGAAAGCTTATGGCAGATGAGACTTTTGGGAGTACATTAGAAAACAGGAG
GGAAAAAGGCCTTATTACTCACTGATTTGTATCCTTGTGTTATTTTATAATATTATTAAAGCTCTTTCCATGTTATATA
GATTCTGTCTCTCAGCTGTACTGCAAATCTATTAGGACAAGTCTCGTCTCTTTTATGTATTCCTTCTACTGTGTCTATA
TGTGGTGGTCTCTCAGTCGAGCAGGCTGTACAGTTTATTCGAAGTGTTCCAAGGAGCTTGTGTGCCTCCACTGCTCTGA
CCTCATTTTTGCAATGTTAATTAAGTTGGGTAGATGACCTATTCGACTGATAACACTCACTAGCTCACTAGTATATGGT
AAGTAGTTTATTCTCTTAGTTAGTTGACCGTGACCAGATTAAAGCCCAAAAAGACAAGAAAAAAAAATCAGGTGGTAGAG

Fig. 9.36

AGTGGGGAACAGAGGTATAGGACACTGTTTTGGGAAAGTGGATCTTCTTGTGTTCCTACAGAGGATAACTCGGGCNTGT
CAGGATGAGGTATTACAAGAAGAGAGAACAAGAGNGGAGGCTCACCATTAAATTTGGCTTCTGGCCTTGGGTCAGCCTT
GCATGATGTTTTGTAGACTGAGAGTAAGGAAGGAGAAGTTGAGACAAAAACTTTACTCTCTGTTTGGTCACTGAGAGTA
AAGGTTCTCTTTGTGCTAGCTTATTCTTAAGCAGTATGCATGAGGCATTTAGGGGTTTATTGCTGAAGAAAATTCATCC
TCTTGTGCTAATTGGGCAGGGATTCCAAGGGATTAAAACCAAAATCATTTGACCACCTGAGTTACAGTAATTTTAGAGC
TTAGGTTGTTTATTTTCACTGTATAGCACAACCAAATACTATTCAGTCTGGCTGCATGGAATGAGATATGGCTAATTAG
ATTTCCTGGCTAACCCAGGTTAAGGCAGAAATGCCATGTTAACAGTAGCACCCTTAAACCTGGGAAAGAGGCTCTTGC
CTCGTGTCACTTGCTTTAGAGGGCCCTACTGGTCTTCCTCCACTGTGCCATGCCTTATGGGGAGACGATTCTGCAGAGC
CATGTGGATATTGTCAATCCAAAGCACCCCATTCCCTCTTCTAAACCACTTGGTACCCCACAATTCCTACCTAAGTGAT
CCCAAGATGACTTCCAGGGCCTACGTGGGTCTCTCTTGAGTTCTCATCTCCCGAAGGTGAACTGTACCACTTGTGTTGA
GCACTCCTAGGACCAAAGAGTGTGGGGCTGTGCATGAATCTTAGATGTTTGGGCTGAGATGTCCTTGGGGGTGTGTGCA
AGGCCCCTCACTGCAGAAAAGAACTGAAGGTGGGGAAGAGAAGAGAAGGGAGTGGGCTACTGGCTGGAGAACCCTGGCT
CCAAAAATTTTAGGCATGGGCTGACATTTCTAACTCTCCAGTGGGAAACCATTTAAAGCAGTCAACACATTGACTACGA
AGTGCAGGCACTACTTTGAGTAACTAGACTTGATCGCAGAGGTCCTTGAATGGCCTCCTGGTCTGCATGTGTAACAACA
GTGGTTATTGTTCTCTGGACTCTAATGCTGTAGGTACTAGATGTGACTGTTCTCCAGAGACATTCCTAGGGAGTTGCTA
ATGGTGGTGGTGGTAATTGCTATTATTATTTCATGAACATTGAAATCTTTTATTTTTTTGTAAAGTTGTCTCCTTGAAT
ACTGGACTGTAAAGGTGTGTGGATGTGTTCTAGCAAATTGAGAATTGTAGTTAATTGAGTTCTGGTTATTTAACTTTTT
ACTGTAGTTTGTACTTGTTGCTTGTTCAGAGTCTAGGCAATTTTACATGGGCTTATTTTATCCTTTCTCCCTATCTCCA
TTAGTCTTCAAGATCAGGAAAATGATTTATGTCATTTTAAAATAGAGCCTTCCTCTGTCTCTCATTTTCCTTCTTCTCT
CTCTCTAAGGTATATTATTGCCTACTATATCCTGTGCCCTGTGCTGGAATTTCTCTTGTGCTAATTTTTATTGATAACA
TATGATGGCTTAAAATGTCATCTAGTGTTTAGTAAATTCATAATAGAAAATAACTTTGTTCCCTCACAAATTTTTACAG
ACATTTAAAATTAGCACTTCAATATCCAAGTATTTTGCTTTTTCTTTTCTGGAGAGAAACTAACACCTGTAGGTATTTG
TTGACATGCAAAAAAATGCATGCAAGAATTTTAAAATTTTATACCCTATAATTGGTTGTATACTATTAATTAGACCTCTT
CTTTAGCTCTCTTACTGTATACACTCTTCTGTTTTCNCAAATTCTCTCCTCTTTCTCTAAATTCCTCACCCTGTTCCCC
ACCCTTTCCCTGCCTTGTCTCTGGGTTTTTGTCTCTCTTGCCTCATTTTTCCTTCTTTCTCTCTCACTTTCTTCCCCCA
CCCCTTCTCTCTTGTTTACACTCCCCGCTCATGTATGTGCCGCTTCGTCTTTGTGTTTATATCTACCAGGGGAAAGACC
AACCATCTTTATTTTTAAATTTTATTTTACTTTAAGTTCTGGGATACATGTGCAGAATGTGCAGGTTTGTTACATAGGT
AAATGTGTGCCATGGTGGTTTGGTGCACCTATCAGCCCATTACCTAGGTATTAAGCCCCGCATGNGTTAGCTATTTATC
CTGATGCTCTCCTTCCCCTCACTGCCTCCCAACATGCCCTGGTGTGTATTGTTCCCTTCCCTGTGTCATGTGTTCTCAT
TGTTTAGCTCCCACTTACGAGTGAAAACATGTGGTGTTTGGTTATCTGTTCCTGTGTTAGTTTGCTGAGGATGATGGCT
TCTGGCTTCATCCATGTCCCTGCAAAGGACATTATCTCATTCCTTTTTATGGCTGCATAGTATTCCATGGTATATATGT
ACCACATTTTCTTTATTCAGTCTATCATTGATCGGCATTTGGGTTGATTCCATGTCTTTGCTATTGTGAATAGTGCTGC
AATAAACATACGCATGCGTGTATCTTTATAATAGAATGATTTATAATCCTTTGGGTATATACCCAGTAATGGGATTGCT
GGGTCAAATGGTATTTCAGGTTCTAGATCCTTGAGGAATCACCACACTGTCTTCCACAATGGAACCAACCATCTTTTAA
AGTAACAAATGACATCTAAGTGTGAAGTCCGAAGTCAAAGAGCTAGAGAGTCATACAGTTTCAGAGTTGTCGCAGTTTT
GATGATTGATTCTCTGGCAGGGTCGTCCTCATTTTGTACCTGAAAATATAGTTCTAGTGAATTATATCACTTGTCCAAG
CCCACACAATGACCAGGCTTCCTAGCCCTGATTTATCAGTCCAGTCCTTTTCTTAAAAATAGTTTCTGAATATATGCAG
GTAAAAATAATAAATAAGCCATCATAAGTTACAGACATGTATGTCTGCTTCTATGGTGCCAAGGAAAGAAAACAAGGGG
AAGGCATGAACATAAAATAACACAGGTGCACTTATACATTGTTTCTTCAAAAGATCATGAAAGGATAGCTTAGAAATTG
CCAGTAAGAACTATGACAAACAAGCTCAGACAAGTTACTGCAGAGAGGAGTGTACTTAAAGTTAGAAAGCGGGAGAAGT
ACACTTGTCAACAGGCAGAAAAGGAGGAGCTATGGACCTTACAATTGGAAAATGTGATTAAAAAAAAAAATAACGAAGCT
GATCCTTCTTGATTTTTCTTGTTTTGAAATTTATGGCAACCAGTACAACAAACCTATTTGAATGTATAAATTAAAATTA
GTATACTGTGATTTACTTGGGCTAATATAAATGTAAAACCCTTTAAGCTAGACCAGCTGTAATTATATTCCCAAAGATT
TGATTTTTATCATTATTTACAGCTAATAAGACATTTATGATCTCTTTTTGGTTGTCTCTGTTGAAGCATTGTTGGCAAT
GCTTTCCTGACTTGAAGTTCTCATGTGTGTTGAAATCGAATTAGGAAAATGAGTAAGTAAATAACTTATCCTAAGAGTA
TAATCTCTCCTTTGTGACATAAATTAGAAATCCATTCACATCTGTGGAATAATTCCCAGGTTTGCGACTACACAATCTG
ATATGCACAAGCAAACATGCCAATCTTTTCTCAGTCTAGGAGAATTTGGTCACTTTCTACTTGAACAAAACAAGCTATA
TGTGCTTTTAAATAGATGTATCATTTTCTCAAAATTGGATTATAAAGAGCTGATCTGAGCTGCAATCAGATGGATAATT
AAACAGCAAAGGTAAGAGGCTTCTGACTGCCCATGTTTACAGTGTTAATTGAAAAAATAAAAATATGATTTTTAATCCT
AAAGGTAATTTGACCAATGCACATGTACAATGATGTAAGGTTCTCTCACTTTCCATTTTAATCTCAGGATTGTGGAGGC
ATTTGAACCTAGCTTTCTCACAGAGAATGGAAGAAGTTTGACTGGAGAAATCTGGCCACATTTTACGTTTTTCTGGGGT
GTGTATAGTTGAATGAAAACATGAAGATGCTACTTTTAAACAATTTTTTAATTTTGTTTTTTCTTCCTTCAGCTATGAT
GCTTTATTGTCTCAGATCTGTTTAATCACCTGGAATACTTTTTCGAGTGATTTTTAAAATGGCAAGAAATGTTCCCTTT
TCCATAATGTAGCTGTTGCCTCTGAAATGCCATAGGTGTTTGCATTTTTTAAATCCTCATTTGTGGCAGTTATTACGTT
TTGCTTCATGTTATGGTAATTTGGCATGCAAACATATCTTTTGTACCAAATTTTAAACTCTTTGAGGACAGGGTTCATA
TCATTGTCTTCTTTACCCTGGGCTTTTCACTGGGTTGGTGAAATGTTTGTGGAATCGGTGAATGAAGATAAGACATACA
TTGTCTTCTGAGAGTGGGCAGACATGTGGCGGGCTATTGCTGGATAATGTGCTCATAATATCCTGCAGATTAATTTGGT
TCTTTGATGGAAAATGAAGTGAAAACATGCATCTGCAGTCCAACCTTTTCCCAATGTTATTCAAAATGTAATTCAATGT
GATCAATTACATTGAAAATAATTGAGAAATGAGATGACACTTAAATTAGTTGAAGACAATTGTGGATTTTGCCCTTGGT
TCTTTGGATAAGTAAACTTTTAGTGTTTTCTCAGAGATTTACAAAATTCCAGGGGCTGTGTATTCTTGCCTATAGGACA
TCCAAATCCTGAGGCTTTTCTTCTTATCATTTCTCATTTAACTGCTTATTAATTCTTTCCAAGAGAAGGAATAAGAAAC

Fig. 9.37

ATGAATTTTTGCTGTTAATTGAACCATCCCTTAAAACTGTTTGGACTGTCTTTTGGGCTATTGAGAAAAACTATTTGGT
CACTTTTCCTGTTTTTTTGAGAGTCCAGGTAGAAGAGGTCTTTATTATTGTCATTACATAGTTCATAATAATATTTCTG
TTTCACTTTTACGTAGCATAACTTTTCAACAAACCTGGCAAAACATCATCCAGGCATTCTGGTCAGTAAAGATCCTGTA
TCAGTTGTGCTGTAAGACATTATTGAGCCGATAATGTAACTGGTCCAGTTTCCCCCTTTTGTCTCTGTAGAGAGTTCGG
CAGCATAGCAGAGGGTCCCATGGAAGTAGGGATAAAAGGGAATTCTTCTTTGGCTTTTAAAAATCTCTCAACTCCATTC
AAACTTCTGCAAGTTTTCCTCCTTGGGAGATATGGAGTGGTTCCAACATCCTTAATATCAGTTGCCTTTTGGTCAAATT
CCACCTTTAATCCCTTCTAAGAATGGGAAAATAAAGACATCTATTATGACGTCCTAAAGGCCTGTAGTTATTGAGAGAG
CGGCCAAGACTAGAATTATAACTTGGGCCTCTGCTATTATGAATATATTGCTTGCTGTGAACTCACTTGGAGTAAACTT
GTGTTATTATAGAAGTAGCAAAGAGGCCAAAAAAGAGACAGGGGCAAAAAGACATGATCATCACAAAGAAAAGATAAAT
GTTTGAGCTGATGGATATCCCAATTTTCCTGACTTGATCATTATACATTGTGTACAGGTATTAAAATATCACATGTACC
TCCCAAATATGTACAACTATTACATGTCAATAAAAACAGTTTAAAAAGTGATCAAAAACAGTAGCAGAAATATATTCCT
TATGTAATTTTCATCGCATTTGAGCATCTAGGATTTTTGACAAGACACTGGGCTTCCGTCTACCATAGGGTGCTTAGGA
GGCCTAGTGATCTCCAGAACTGTGGGGTGTCAGTTCAAGAGTCTGCTCCAAGAATACATTAAGTGCTTACTTAATGCAG
AGCACTATCTTTAATGCTTTGAAGATTATAAGTTCTATTTTGACCCATCTTCTATGTTGGGCCATTTATTTTTATGAT
TTTTGCTTCTGCTTTGTCATTTATATGTAGGCGACAGTAATAGTAATGGCCTGGTAACCTTACAGGGAACTGCAGGTTG
ATGGTGGGGAAGCATCTTATTCTAATATACCCATATAAAGACATAAAGATAGCATTTATATATTTGTAGTCAAATCATT
GGTTCATCCTATTTTCTGCAGTTGAAGATAGATATCACCATGTATATGGCCAATTATCTTTATCCAGTTCAATTTGGCC
AGGTCAATGAAACTTGTATTTATGTCATACTCTTGTGTCATGGGAGATAGAAGAAGTATAATAGTGGCCCTAATTTACT
TTTGGTAAAATTGAGGTTAAGTGATTTTCCCAAATTTATTTTGATATAAAGTAAATTGCAGATACAAGTTTTTTGGTCT
CTAACCTTGTGTTATTTAATTGTTCCACAAAGAAATGCTGCATATTAAAATTATGGTTTTAAATGGCTCACTCAGCCCT
TTTGTCCCTCCCTTCTCCAAGTAAAACAACTAACCCCTATTTTTCAGTTTGTTGTGAATTCAGTTTGTCCAAACTAGGC
TGGGGATAGGTTAATTAAATAATTATATAGTGATTAACATGGGGTTAGAATTTATGTCAGATTGGGGCAAAACCACCTT
TTGAATACCTAGAAGATAGTGAAATGTACTTAATACTAACATTGTCATGAATATCAATCACAGGTTTAGAAGTCTTTTG
ATATATATGAGCTAAATATGGGGTTGAATCCCCACCAATCATATCTTAACAGATTTTTTAAAAAGGTAAGTATCTGAA
TCAGCTGCTTTATTTTATTTGTCTCTTTCTCATAAAAATGACAATAAAATTATGGTATGTGAACTTCTGATTATTTAGA
TTCCAGTTAAACAGGATTTTACTTTAGTTTCTTTTTTTTTTTTTACTGAAAAAAAATTTTATTGACTTGTTTTTTGGTG
TATATAGTTCTATATATTTTAACACATGTATACATTCATATAACCATCACCACAATCATATGAAAACTCTTTTATAAAC
CCTCAAACTCCCACATATGACTTCTTTTTTTTTCTTTTTATTTATTTATTATTATCATACTTTAAGTTTTAGGGTACAT
GTGCACAATGTGCAGGTTAGTTACATATGTATACATACCATTTGACGCAGCCATCCCGTCACTGGGTATATACCCAAAG
GACTACAAATCATACTGCCATAAAGCCAGGAGAATTTCTTGAGCCCAGGAGTTTAAGACCAAGCTTGGCAATATAGCAA
GAGCTTATCCCTAATTTTATTTTTTATTTTATTTATTTTTTATTTTATTTATTATTATTATACTTTAAGTTTTAGGGTA
CATGTGCACAATGTGCAGGTTAGTTACATATGTATACATGTGCCATGCTGGTGCGCTGCACCCACTAACTCGTCATCTA
GCATTAGGTATATCTCCCAGTGCTATCCCTCCCCCCTCCCCCCACCCCACAACAGTCCCCAGAGTGTGATGTTCCCCTT
CCTGTGTCCATGTGTTCTCATTGTTCAATTCCCACCTATGAGTGAGAATATGCGGTGTTTGGTTTTTTGTTCTTGCGAT
AGTTTACTGAGAATGATGATTTCCAATTATTATGAAGAGAGAGAATAATGGTTTCTCACTTTTCAATTCCATTTAGAAG
GAGGTTGTTTCTTTCAGAACACCAAATGAAGCTTTCTCAGTGGCCATCCTATAGGACCTTTGCACTTGAATCTCTGGTT
TCTGAATTTGGGACATTTTAAAATCCTAAGATTTTTCCAGGTGATCTTTAAAAATGGGATCTAGGGAGATTTTAGCAAA
TTAATGGTTTCTGTGTTTAACTCTTTTAAAACATATTTTCATGATCGTGTGTGTGTGTGTGTGTGTGTGTGTGTGCGNG
GGCAGTTGGGGGGGTGGGTGAAGGGGGATATGGGGAGAACAAACAATAACCAAAGAAACAATAGTGGAACTTAAAAATA
TTTTCTACTAACTTATTTGCTAATAATTATTCAGGCAGCTTTATGAAAGCTCTTTGGAAATTCTAGAAGTGTTTCCATT
TCAGGCTTAATATATTTGGATCATAAATAAATATCAGATACCTTTTGGAGGCATTAGAAACTAAACATTATGCAAAGGC
TACCCTCTGTTGCGTCAGGAGCTTGAATTGTTTTCATTAAAATATCTGCTATGAAAGCACTGAGATTAGATGGGATGCT
ATCAAATGTCAGAGATTTGTATTCTTGGTAGAAACTGAGATTTCATTTTCCTTCATCCCATTCTGATGCTGGCTTCCCT
GAAGCAACACTCCTGTTCCAGATTTGTATGCTTGAGGTAAGTCAGAAAAGGAATTTCGGTGAGGCATGAGTTTGTTGAT
GAAACGTGGGGGAAAACCAAATGGACATCTTCAGAATGAAAGTGTACGTCTTTGTCTGTCTGAATGTGTGAGAAAGAAG
AACACTGAACACAGTCTAAACCTCCTGCTGGTGTGATTATTGAGTAGTGTTGATGGCCAAAATATGAATGAAGGTTTTT
CTGTTGCAAAATGCTTTATGTTATGTGCAGGGCAGACATCTGTGTGCCTGCCTTAAATTTATGAACTAATAACATTCTG
TTCCAAGAAATCCTGTCAGGTCTTTAACGGTACCATTTTGTTCTGAGTTATTCTGGTAAATGAATGATTTTGCTTTTAA
GTAATTATTTTTTGAATTTTTAAATATAAAGTCACATATGGTTTAATGTATGGAGAGGATGCCTTTATCATCAATGAAA
ACTTTAAGAATTGACTGATTGCATTTTATTTTAACAAAATATCATTCATTATTTTCTTCTATTTGGAACAGATGTAAAT
GTTCCAATCTATTTTGGATTCAAATGAATTTTGAATCAAATAGATTTAAAATGAATCTATTTTGAATCAACAAAATAGA
TTCAAGCAAGTTTTATGAGTGAGATTACAGATGAATGATAATAAGCAAAATCATGAGAAAACCCAACCCAAATAATTGA
GTTAGACTATACTATAAACAAAGTAAATTTAAAAACATATATCCTCAAAGAACTGTGGCCAGTAAGATAGATACTCTCT
GAGGCTACCCTCCTAGTATAGTAACGGTAATTCTGCTGAAACCAATTAGGCACTGTTGAAAGCAACTTCTCGCTGCCGA
TGAAGGGACTGGATCCTGTAGCTTGGTGTCCTTGTCAAGTCCTCAGTGTGTACTCAGCTTGCCCCTGCTAATACACACT
GGTCTTAAATAAAACAGAGTGGCAAATATTTAGAGTGAGTTTTATGTGTCTTTGGGATTTTTCCTTCCCCGCCATTGGT
AAATAGCACGTTTCCTCTGCAGATCTGTGACCTTTGAGATAACTTCCCTTGTTAAACACACACTGATTTGTGTGGGTAT
TTGTTTCTTTCTTTTTTTTTTCAAAAGCTATTCCTTCTTTTCTACTTTATATTCAGTTGCTTTCAACACAGAGTAAAG
TCTTCTGATGAATCTCTTGTCTGTAGTTTTGAAAGGAGGGGAGAAGCAAAGGAATTAGCAATCACAAAGATAAACCTGC
AAAGGCAAACTAAGTAGAAACATGTTTTTCCGTTGCAAATTATGCTTAACTACTATAGGCTGTAATCCCTATGCTGACA
TATCTCAGAATAAAATGTAAGTTGCTTGAGATGCTATTCTGAAGCATGTGATATGGTTTTATTGATTGATAAATTTATC

Fig. 9.38

CATATGATGATAGTTGTAGATTTTCAGAGGCCCCATATGGACCATTTGAAATGAAAATGTTATATTGGCAATGGATGAG
AACATGCCACTTGCCCTGCTCCATACAAACTTTGATTCCTAGCAATCAGCACATGTTAGAGAGCTGGAGGCCACGGTAT
GGTGTGCAAGTGCTCCTGTGCTGAAGTGACACCAGAACAATCACCACATTGCCATCAGGCCGTCCATCTGAGGTAGGGT
TTTCCTTCTTGTTTCAATCTTTATCATTCCTGGAGAATTTGCCAAGGCCCCCAGGGCAGTGCTGAGGCCTCCAGCGCCC
CCTACAAATCTCTTTTTCTGTCCCTTCAACATTTTCAGGTCTAACTACCTGTAGTTTTCCTCTCTAATTTCTGGCCAA
AGCTTGGCAGGGGGCAGGCGCAGAATTAGGTTGAAGAGGCCAGTATGAGCAGGCATACCAAGGTCCATTGTGCTATACC
AGAGGTGTTACATTAGACTAATGAAGGGATTATAGAAACTTAGCTCTCCATCTGAATTCTCTTATTAACACATCACTGT
GAATCAGCCTGCTGCTTTCGGTGTTGTGTATTTTTTCCCTTTGTTACTTCTGTTACTGCTAACGATATTGGTATCATTT
GTTGTATCAATGCAACTGACTTGTACTTCAAATTAATATCTCAACCAACCTAGAATTTCTTGTCTAGCTATGGTAGGTA
GTATGGGGTGGTAGTGGTGTTGTCTCAGGCTAGTATATGATAATATGATTTTGAAGTCTGTTTTCCCCCCCATTTAACG
AACTAGTGTGAACATCTATCCATGCCTTTTAAACACTTTTCTCCAAGATAATTTTTTATAGTTTTTTAATGGTTAAATA
ACATTAACTTAGCCAATGAAATTTAAAATATTTTGCTACTGTAAAAATTATTGTGTATCTCCTGGTAGTTAAATCAGGA
TTATTTCCTTAGGATGCAGAGCTTGTATGTTAAGGAGTATAGTTATTCATAAAGGTTTGATTTTTTTGGCCAAATTGCT
CTCCAGAAAGTTTTTTTCCCCTTCAGTTTATTCTCCTACCAGCAGTGCATGAGAGGGCACATTTTCCCGTATCTTAAGT
AGTGTTGTTTTCTAAAAATGTTGCCAATCTGATATGGGGAAAATGGCATTTCACTGTGGTTTTTCTGTGTTTGTTAAGT
CACTAGTGAGGTTGGGTAGTTTTATCCTTTGCAAATTGCCTATCAATGTTCCTTACTTATTTTTCTTTTGAGATGCTTA
TTTTCCAATTAATTTTACTGACAATTTTTATATAGTACAGATAGTAATCCATGTGTCTATAGGTTGTTTATAATGTAAA
TATTTTTTTCCAAGTTTCTTAGTCACTTTTTGACTTTTTCCCTTGGGTATATTTTTACATGAGAAGTTTTTGTGCATGT
GATTGAGTCTTTTTTAATTGTGGTAAGAACATTTAACATGAGACTTGCCCTTTAAAATGTGTTTATGTCTATAATACAG
TATTATTAACTATGGGCATAATGTTGCCCAGCAAATCTCTAGGACTTAATCATTTTACATAACTGGAACTTTATACCCT
CTGAATAGCAAATCCCCATTTCCCCCTTCCCCAGCCCCTGGGCAGTGGTTGAGTCTTTGATGTTTTCCTTTTAAAGTTT
CTGCCTTTGGAGTTAGTTTAGAAATGACTTCATCATCCCAAGATCACACACACTTTTCCTACATTTTCTTCCAGTTTCT
TTATTTTACATGCAAATCTTAATCCATCTGGAATTTATTTTGTTGTATAGGAGTGCAAGAATTTAACTTTATATTTTTC
TCAGATAGTTTTCCACTTGCCAGTGGAATAATGATTTGTTGAATAATCTATCCTTTGCTTTTTAAGTTTTACCTTGAAA
AAACATAATATAAAATTTTGGATCTAGTTTTTTAATATAATTCATTGATTTCTCTTTTTGTTGGACAGCATAACATTGT
TTTAATTACTGTAATGCAGTTAAACATCTGATAGCTTGAATCATTCTTATCTTTTTCAAACATTTCTTGGCAGTTTCTT
TCATCATCTCCTGACCAGATGGTCGTCATAATGTCTTAATTGCTCATTCTACCATTGGTCTCACTTGCTTCTAATCCAT
TCACAACAAAGTTGGCTGAATTGTTGTTCTAAAACACAAATTGGATCACGTTACGCCCTGCTTGTTGTGTATACATACT
TCCAGCTATTTTTATCAACTAAAAATGAGCCCTTTGCCTATAACAAGATTTTAACCTGAAGTCCAAGCAATTTCTGAAC
TTCAGAGTGTTTGTAGACACCATTTCGGTGATTTTTTTTTTTTTTTTCTGAGTAGAGGATTGATAGCATCATAGATTTT
GAAAGAGCCATGACTCCAAAGCATTAATAACCTCTGTGCCACAGGAAGAAAGTCAGACCCCCCAGAACGGCTTGTCAGT
AGCAGGTCCTCCCCTGGTTGACATTTCTTTCTTACCTGCCTGCCCTCTCCCTGACCACTCTTCCACATCCCCACCCTTC
CCCTCCTGGACTGCTTGCAATTGTCTATCCAGTCTGCTGTTTCACACCCCAGTGCCTTTTTACATGTTATTCCTTCTGC
CAAAGTGTTCTCCCACACATACCTCGCCCATCTGGAAAATGGTTCCTTGTCCTTCAAACAACAATCAAAGAGCCTCCTC
CTCTATGAAACTTTGTCTGATCCCCTTAAGCAATGCTGATCTCTCTCCTTTATTTTTAACCACTGTACTTAATCTGTAT
TTTACCGTGACTCTTCTACTCTTCCTCCTCTACTGGTACTATAATATCTTTGGGAATAAGGACTGTGTTTTTGTAACCA
CAGAGCCCACTGCCTGGCATAGCATAGGCACTCAGTGAATGCTTGATGAACAGAAGAATGGATGCAAACAATGAATGTA
TGGCAGGACATAGCCCTGGTGAAATCACTGGCAGGGGCTTGTGTGAAGTAACTGCATAAGAAAAAAACAGCATGCTGTT
AGAGGTGAAGGGACCAGCTTTGAGTTTAACAGAAGTAAGGACAGAATGGGTGAAGCCATAATGTCAACTTTGAAATATC
ACCATTTATTAAGAAACCACATTTGAAGTTCTAGGATCCTTAAATGAAGGCGCTTTTCACCAAATACTTTTCTAAATTT
CCTGGGGTGTTTATAACATGGAGGACCTATTTCCTGAGCTACCAGAGTCCTAACACATACCTAATTATGAGTTGGTCAC
CAAGAGTTATCAGTAATCACAAGTAATGAAAGCATGGCTTTGGGTGAGTGGGTGGGTAGGGTGGGTGAGGTGGGATATG
CCATGTTTTGGACCAAAGCTGTCCACATTGATGTGTAGCCATTGTTTTCATGATTCTAGCACCCAGTGGATGTTGAGTA
AATATTTTGTGAGTAATTGAATGCTGAGTGTGTAGCTGGGGGTATGACAGCCAGCTAACTGTCATGTCTACTTTCTCAG
CTCTCTGAGATGGCAATGCTAATTTTGCTGGAGAAAGTAGCATCACTGTTTTACTTGGTTCCCTCTCTTCATACTGCCT
AATTTTAGCTAGTTCTTATTATTACTTGCTTTGTTTACTTCTTGGATTCTTTATCGCATTACCTGTGGTGTCACCCACT
GTCTTACTCTGGGCAAATGAACCTTGTTTTTTTGAGAATGTTAAGTTCATCTGACATAAGCCGCTCAATTTCACTCCTC
AAATTCTTCTACATCAGCATTCTTTTCTCTACCCTGGGGAAAAAGAACCTCCTCATTTAAGTGTGCTTTCTCTTCTTCT
TAAATATTGCCTAAGCAACTTTTTAACTTTTAATCTCTCATTGTCCATTTACCTCTTTCTTTGTTTGCAGACATCATTA
GAATCTCCATCCTTGAAACAACTCAATAAACAAAAATTTTGCTTGACTTTACTAGTTGAATACCTTAACGTTCACTTTT
CTTTTTACCTCCAAACTTCTTGAATGACCTATGACCACTATCTACACCTTTTCTTCATACACTGAGGTCTGGAAATCTT
TATTACCTGGTTTCTTCTCTCAGTCTCCAAATTATTAAAAAGTCAATTTCTCAGTTTTCATTTTTCTTCACCTCTTGAT
AACACTTGAAACCATTAAAATTCCCCTTTATTTTGAATGGGCTCTTTCTTAATGTCTATCACACTCAACTGTCTATTTG
CTCGTATCTTTCTGTTTTATTTTCTGTTTCTTCCGTGGTCCTCTTTCTGATGTCCTGAGAGTGGATATTAAGTTGCACC
ATGTCTGCAGGGATGACACCCCAACCCTAACCTTCAAGTCAGGCCTCTTTCCTATGTTCAGATCTACTGTTTCTGGAAA
GCTCTACCATCTGCCCCACAAAAGCTTCAACATTAATAGAAATTCCGTATAATTTAAAACAAAATTCCACCTATATTTT
CTTTCAAATAAATGTTTAATTTGAAATATTTACATTAATGATGCAACCATTTTTCTATCCACCCAAACTTGAGACCTAA
GAATGAGTTGTTTGCTGATTCTTCTCTCATAGCCAACCATTTCAATGTTCTCTGATTTCTACTGTTACCCAGGCTTTGC
TTTACATTCCCACTTTTATGGTGCTTATCTAAACCCTTACTTTTGGCCTTTAATATTGTATTGGCTATTTATTTATTAT
TTTATTATTATACTTTAATTTCTGGGATACATGTGCAGAACGTGCAGGTTTGTTACATAGGTATACACGTGTTGTGGTG
GTTTGCTGCACCTATCAACCGTCATCTACATTAGGTATTTCCTCTATCCCTCCCCTAGTCCCCCCACCCCCTGACAGGC

Fig. 9.39

CCTGGTGTGTGATGGTCCCCTCCCTGTGTCCATGTGTTCTCATCGTTCAACTCCCACTTATGAGTGAGAACACGTGGTG
TTTGGTTTTCTGTTCTTATGTTAGTTTGTTGAGAATGATGGTGTCCAGCTTCATCCGTGTCCCTGAAAAGGACATGAAC
TCATCCTTTTTTATGACCGCATAGTATTCCATGGTATATATGTGCCACATTTTCTTTATCCAGTCTATCATTGATGGGC
ATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAACAGTGCCACAATAAACATACGCGTGCATGTGTCTTTATAGCAGCA
TGATTTATAGTCCTTTGGGTATATACCCAGTAATAGGAATGCTGGGTCAAATGGTGTATCTGGTTCTAGATCCTTGAGG
GATCACCACACTGTCTTCCACAATGATTGAACTAATTTACACTCCCACCAACAGTGTAAAAGCATTCCTATTTCTCCAC
ATCCACTCCAGCATCTGCTGTTTCCTGACTTTTTAATGATTGCTATTCTAATTGGCATGAGATGGTATCTCATTGTGGT
TTTGATTTGCGTTTCTCTAATGACCAGTGATGATGAGCTTTTTTTCATACGTTTGCAGGGGGCATAAATGTCTTCTTT
TGAGAAGTGTCTGTTCATATTCTTCACCCTCTTTTTGATGGGGTTGTTTGGTTTCTTTCTTGTAAATTTGTTTAAGTTC
CTTGTAGATTCTGAATATTAGTCCTTTGTCAGATGGATAGATTGCAAAAATTTTCTCCCACTCTGTAGGGTGCCTGTTC
ACTCTGATGATAGTTTCTTTTGCTGTGCAGAAGCTCTTTAGTTTAATTAGATCCCATTTGTCTATTTTGGCTTTTGTTG
CCATTGCTTTTGGTGTTTTAGTCATGAAATCTTTGCCCATGCCTATATCCTCAATGGTATTGCCTAGGTTTTCTTCTAG
GCTTTTTATGGTTTTAGGTCTTACGTGTAGGTCTTCAATCCATTTTGAATTAATTTTTGATAAGGGGTAAGGAAGGGGT
CCAGTTTCAGTTTTCTGCTTATGGCTAGCCAGTTTTCCCAACACCATTTATTAAATAGGGAATCCTTTCCCCATTGCTT
GTTTTTGTCAGGTTTGTCAAAGATCAGATGGTTGTAGATGTGTGGTGTTATTTCTGAGCCTCTGTTCTGTTCCATTGGT
CTATATATCTGTTTTGGTGCCAGTACCGTGCTATTTTGGTTACTGTAGCCTTGTAGTATAGTTTGAAGTCAGGTAGCGT
GATGCCTCCAGTTTGTTCTTTTTGCTTAGGATTGTCTTGGCTATACAGGCTCTTTTTTGGTTCCATAAAGATGCTTTTC
CTGGCTTTAGTTGTTTCTTCTCTAGGATATTCTTTACATCGCAACCAGAATAAGTCATCAAAGGTCCAATTATGCCACA
TTCTTGCTCAAAGATCTTCAATGAATCTTGATTTCTATGTGATAATGGTTAATTTCCTACATGATTAACATGTACTCTG
AAGCTAGACTGCCCGGATTTTGATCCTGGTCCCACTACTTCCTAGTTTTGTAACCTTGGAAAAATTATTCAACTCCTTT
GTGCTTTAGTTGCCTCGGTGAAAAATGGGGATAATCATAGTGCTGCCTTATAGGGTTGTTGTAATAATTAAATGATTAT
CCTGCACATAGTAAACAGTCAATGAATTTATGCTATTATTATTAGTCTGCTATTTGTGGGCTTTCATATTTTGTCTCAA
ATCCAACCTTCTCTTTACTCACTATTTCTAAACACATTGTGCATTTTTCAATATATATGCATTTCAATATCTATCTTTT
GCTTCCTCTGCCTGTAATACCCTTTTCTACGCCCTATCTCTCCTGTGTCTTTAGAAATTCTATCAGTTCTTCAAATGAA
CCTCAAATAGACTTCCTCCACAATCCTTCACCTATCATACCAGGATTGTTTATGTTTCTGAAATTTCACAGCCTATCTT
ATACTTTTCCTGTTTACTTGATTCATGTTGGCTTAGTTTAATTACACACGAAGAAATCTTGTGTTGCCTGATGGACTGT
AAACTCCTTGAAAACAGGGTTTGTGTTCATTTTTTTTGTATTCTAAAGTAACAAGGAAAGTTCTCCAAACATAAATGTA
ATAGGTATTTGTTGAATGAATATAGAAGGAAGGGTGTAGGTTTTGGATAAGAAATCATCATTATCAAACTAGTCAAAAA
TGACAAGAGTATTGTTTTGGATGCATAAGTATAGAATTAGTACCTCTCACTCATCCCCCACTAAGACGTTTTTGTCGTT
AGCTTGCTGCTAACTGGGCTCTGGCTGTTACCTCGCAAAGACTCTGAAGTAGGAAAGAGCTTGGCACATTTAGAAACTC
ACAGATCATCAATGCTGTAGTGAGGTGAAGGAGGGAGAAAGTACCATGGGTTGAAGTTAGAGAGTTGGAGAGAGATAGG
ATAGGTCACTAGAACTTTCAGGCCAAGTTATGCAGTTTAGGGTTTTTTTTTTTTTTGTTTTGTTTTTAAACAATGGAAA
GCCTTTGAAGGGTTTTAAGCTGGGGAATAAAAAGATAATACTTTACTTTTAAAATTGCACCCAGGATGGATGGAAGACA
GAGAGTGGGAAGATGAGTGAAAGCAGAGAAAACAGTTGGGCACTCTTGTAGGTGAGAGACTGCATGGCCGGGGCTCAAC
TGGCAACAGTGGAGATGGAGAGAGGTGGGTGGAATTGAGATTTATTTGAAAGTAGAATGGACAGGATTTGCTGAAGAA
ATGTTAGGGAAAAGAAAGAAAGCAATTTGATATGATGTCTCAGTTTCTCACTCAAACATCTACGTGGATGTTGTGGCCA
TATTTCTTATTTAACTTATGGATGAAAGAAGGTTTCATATAGCAGATAATTTCCAACAATTCTTAGGCATCAATTTACC
TGACAATAGAAAACTCTGATGCCATTTGGGATAGAATGAATTGTTCCTATATGACTTCCAGAGACTGAGTCATTGTGGG
TGCTTGTCATGCAGTACTCACTGAGGTGTAGGAGGATAGCTTCATGGAGAAGATATATCTTGAGGTGGATCTAGAATGA
ATATCAAGCTAAATTTAAAATTATTAAGGATGGAATGAAGTTTATATTCATTATCCACAGTCCATTTGTATCAATTTTC
TGGGATGTCTATTATCCTGTAAAAAACATGTATTTCCGCAGTTATAAGAGCTTTGATATTGGTGTGAAAACAATGGTCC
CTAATTAAGCCATAAGGTATTTTGGGAATTTAAACAAATGTTTGGTGGTTATCAACTGGGAACTTCTGGAGAGGTGAAA
TATTGTATCGGGGACGCATTGTTCTTTTTAAAGGCCACACGGTGTTCTACTTATATGTCATATCATGTACATAGCCAGT
TCCTTCCTGGTGGACATTTAGGTTGTCTCAACCTTTTCCTATCTCCAACAGTGCATGCTTGTGCAAGTATATCCGTAGG
ACAAAATCTTAAGGATAGAATTATTAGATAAAAGCAGTTACCAAATTTACCAATCTTCCTTTCCAGAAGATTGTCTGGG
AATGACTGCTTTTCTTACCACCCTACCAACACAGGTGCTAATCTCATAGGAAAAAAAAATGCTACTTTGTTTTAATTTTA
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CATTCTTCAACCTCTACAATTATGAGAAAGTAATGACTGTCAAAAAAAAAATTGCTCATTTTTTCTGACATCTTTCAAG
GCCCTGAATAGACGTCCTAATTTCCAGGTCTGTGTAGACTGACTTGGGTTACTCAGGTAATGGCCTCTCTTCTGTTGAT
GAACACACGTATTGAAGCATATATATGCCAGGCTCAGTACTAGACACAAGGGGTACAGTCAATGAACAAAATACACACA
ATATTCTACCCTCATAGAGCTTACATTTTAAAGGGGAAGCATACAAAAAATAAATTAGCTAAAAATATAAATATCAAG
TGGTAATAGTACCACACAGAAGAATAAAGCAGAGTAAGGGTTTAGATGGTGAAGATAGGAGAGCTGCTCTTTTACATGA
GGTTAACAGGAAAGGCATTTCCAAGTACTTCTCCCTGCTTCTTTCTCATCTGTGTGCTCTAGTTTTACTCTCCCTCCCT
TGTTTGATCCCTATTATTACTTGCAAGTGTAAATTCCCTAATGCAGAACATGGTTAGCATTTGGTTAATGGCTTTCCCG
TAATAATTGCATTAAAATGATTTCTCTCCACTATGAATTATCTGACATGTCAGAACAGACGAATGCTATCTAAAGGCTT
TTTAAAATCTGTTAAATTTATAGGGCATATTCCAGCCCTCACCAAGGGTCACTTCACTCCATTCTCAGATAGTGCCCAC
TGTCCTGCATTTGCCTGCTGTCAATCACAAAAGAGATGGCTTCTTAATGAGGCTGGTTTATGACTTTTTTCCTTAAGAC
AAAGTCAGTCTTCTTTTGCAAAAGTTGTTCTAATGAAGGAAAGTAGAAATAAAAATTCATCATAGCTTCTATGGCCAGA
CATAAAATGTCTACAGCAGGATTGATATGGAAACATAAGCTTTTATTAATTTGTTTATCTGGATGCTTCTGAAGCTAGA
AAGAAAGACTTTCACCATGGAAGCACTGGCAACTGAATTTCCATAATGGATTCAAAGATCTAAAGAATATCCTCAATTT
ACATATTCTTTCTGAATTTATGTTCAAAGAAAGGGTATTAATATAAACATAAAGTAAAATAAGACAAAGCCCAAGTGTA

Fig. 9.40

TTAAGACTATTCAAGGCCTGCCATGCAAATTGCAGTGGAAAAGTCTACCAGTAGGTTATTGGGAAACAGAGAGAAACTT
GGAGTCCAAAGATAGGAGAGGATACCCACCACTAACTTTCAATGAAACCACAAGCTGGCCACTTAGCTTTTCTTGTGCT
GTAGAGTCAAATGTGAAACAATAGGCTTTATTTATTTAATACTTTGTATAAGGCACTTTGCTCAGTACATTATATATTG
TCTCATCCTCATAGTGAGCCTGAAGGGTAGTAATTTCATTGTACCTTACAGATGAATAAACTTAGACTTAGAGACCGGT
CAAATAGCCTGCCCAAAACAACCAGTTAATAAATGGAATTGGGATTTAAACTTAGATTTGTCTGATTCCAAAGCTTGTG
CCCAACCAGTGTTTATTGAGTACCTTCCAAAGAGCCAAGCAACAGTTTGAAATAGGTTCACATATGTTCAACTATCACA
ACAACCAGATAGAGTAGATATTCTGTTGAAGATGAGGAAATGATGTGGGGGAGAAAAAGTGATTGTGTGGGGGAGAAAA
AGTGATTGTGTTGAGGTCACACATCTAGAGTGGTCGAGTCAGAATATGTGTGAACTCAAGACCTCTAGCTCCAAACCTA
TGAATTTTGTTTTAAAACATGACTATAGTCTATTCTCTGTACAATGTTCATAATATTTTTTCTGCCAGTTGCCTGCTC
CCTTTAGGTAAAGGGATAATTAGCAGAGATTCCTTGCAGAAAAGTGTCAAATATCAGCACTTAAAAACAGTGCTGAATT
TTCCCGTTATTTAGCCCATTACTTCATTGAGCCTAATTTCATGCTTCTAAAAACAGCATAAGTTCTGTGGGTAGTGTTC
AGTATGCTTCAGTGAACCGAATGCATCCTAGTGGCCTGAGAAGACTCCTACTGCTTCTAAACATGTATGAATAATGGTT
GCCACCTGCAAGTAGCTTAGGCAGTGGGCAATCATACTTCAATTCTAAAGGGTGTGGAAGGGATGAGTATTTTCTGTTT
GAAGCTCAAGCTAGATTAAATGAATTCTTGATCTTAATCTACTTTGAACTCTACTTGGAACACATCATGAGTTGTTTTG
GCTTACTATTAATTTTTAAATACAAATACAGTGCTCTTGTATTGAAAGCATAGGATTTTGTGTAGGAGAAAATTTGAAT
GTCTTGAAAACATTCAAAGGAGAGCTCAGGGAAATAAATGAAAGCTGGTGGATTTCTAAAAATCTTTATTGAGGATTAA
TATTAGAAACTTGCTGTACAGTCTAACTGATTTTTGACTTTGTTTCTGGGCTATTGGTTTCATATAAGACACTATTAGT
AATTTCAGAACAAATAATATGGCCACATTTCTTGTTCCTAATAAATTGGTACTACTTGGGATCAATGGATGATTGTTGT
CATTCCCCAAAAGATTTTTTAACAGCAGAACCAGAAAACTAATTCACAAATTATCAATATTCAGCACTTTGATAAATTC
AGATGAATTTGCCTACCTAAAGAAATGCTACCTGAAAAGCTTCTCTGGCAGGCTTCTCCAGAGTTTCATTATCTACTCT
GAACTTTTGTTTACATAGCAATCATTTCTGCTGTGTTCCTTTTCCCTACTAGCCTTGGTAGGCTTCTTAGCTGAATTGT
CCTGAAACCTATAAACCAGCCCTGGAGGCTCTGAAAAATTAAAGATCTGTCTTTTTTGTTCTGTTTAATAAATGTTAGC
TTAAGAAAGTCTGCAATGGAAGAACACTCAACTTGTCCTAAATGATTCTCTCATTTATTCAAGTTGCAAATAGAAAGAG
GTATTTCCCAATTTGCAATAAAATATTGGACTTTAATTTCTAAAAAAAAATCTTGAAAGCTACATACTCCATAGACTTC
TAAGCAAAGAGAGTCAAGAGACATTCATCTTCTTGAATCTTCATTAATCTTCACGTCCTAAATAATTCTCTCATTTATT
CAAGTTGCAAATAGAAAGAGGTATTCCCCAATTAGAAATAAAATATTGGGCTTCAGTTTCAAAAAAAAATCTTGAAAGC
TACATGCTCCATAGACTTCTAAGCAAAGAGAGTCAAGAGACAATCATCTTCATAACTAACACCAATTGTCATAAAGCTT
CCAAATGTAAACCTAAACTTTTGTTAGGAGTAAAAATAAAAAAGCCAAACAAATGAAAAGCTGTGAACTTTCTAAAAC
ATCTTAAAGATTCTCTGGAAATTTAAACATTTAAGTTATATGTTAAGTTGTGTCTATCAAGCAGGTACTTTAGAAAAAG
GGAAGATTTAAACAATTTAAATATATGCTCTAGTTGTTTGATTTAAAATGCTTTTTGTGCCAAAGAAATTCAGGATAGA
GATTTAGTAATCAGAGTTGAAAAATGCATAACACATTGTTCTAGTAATTCCCATCATTCAAAAGGAACCATCTGTACTG
AATATTCTTAGATAGTTTTTCAAGTTCGGTTTTACATTGCAGACATAAAGGAACTACTTTTGTATCTCTTAGACAACAA
TTCTGTTATAGAAGTTTACAGGCTAATGGCAAACACATCTCATAATTGTCCTTCCAGTTTCTTGACCCATGTTTACTTC
CCTTTAATTTCATGCCATAAGTCAGTGCTCTTGACAAAGTATACTCTGAACATATTTATAAATCATTATTTTTTCCAAG
CAGTTAATCTCTAACTCCCTTTTTCATTTCTGTATCTCCATCAGCATTTTCTTTGCAGGGTTCAATACTCTTAATTTGA
CATACAGACCCATCCCTGAGAGCAAGGGAGAGAGAGGAAAGCCCTGGCCTTTCTTTTTGTACCTTGATTTTTTCCATTC
AAACTCATCATTGTTGGTGCATTGAAATCTGGAGGTTTGAGTGAGAGATGGAATCAGAGAGATTTAGGAATGGATTCAG
ATTCTACAACTAAAAACCATTAGGATGCCTATGAGCTTTGTTTTCTGCATAATATCTGAATTACAAATTGTATTTAACA
AGTAAAACTAAGTTGTGTCCGACTAATTGAAAACCACTTTGGTTAATGTTACCTCTTTTTGTGTCCATTTAAATCCATT
AAATCTTTCTTACTTTTGCCTTTAAAATTAGAGTAATCTATACAATTCATGCTACTGACTCTGCCTTTTAAAACACACA
AATATTAAAAAAAAAAGAGACATGTTCTGGTGTCTTCCCCTCAGCCCAGTGAGATGTGTTACACAGTAGTCTTTGTTAT
CAGCCTTTGGTTTCTGATAATTTAGAAAGCTTTCAATCCCCATCACTTATGAAAGTCTGTGAACAATAATTTTTATTTA
AAGATTTCTTACAGTGCCGAATCTTACAACCATTTATAAATTCATGTCATGTTTTCTTAAAGTTACAGAACTCTTTTCA
ATTTTTAAGCCTTAACCTCTTGTCTGCATAGCAAATCCTATTTATTTTTTAAAAAGCTGAATTCAAGTGTCATCTCTTA
AATGAAGATTCCTGATCATGTCAATCAAAGAGAGCTTTCTCCTCTGAAATCTTTTTTTTTTAAATATTAGTTTCAGGGG
CACATGTTTAAGTTTGCTCTAATAGATAAATGGTGTGTTTTGGGGGTTTGGTGTACATATTATTTCGTCACCCAGGTAA
TGAGCATAGTACCCAATATGTAGTCTTCTGATCATCACCTTCCTCCTACCCTCCACCCTCAAATAGGCCCCGCTGTCTG
TCCTTCTCTTCGTTGTGTCCATGTAACTCAATGTTTAGCTCCCAATTATAAATGAGAACATGCAGTATTTGGTTTTCTG
TTCCTGTGTTAGTTCTCTTAGGATAATGGCCTCCAGCCGCATACATGTTGCTGCAAAGGACATGATCTCATTCTTTTTT
ATGGTTGCATAGTATTCCATAATGTATATGTACCACATTTTCTTTATTCAGTCTAATGTTGTTGACCATTTTGGTTGAT
ACCTTGTCTTTGTTATTGTGAATAGAGCTGCAATGAACATATGCATGTGTGTATCATTATGGTAGAATGATTTATATTC
CTTTGGGTACATACCCAATAATAGGACTGCTGGGTCAAATGGTGGTTCTGTTTTAAGTTCTTCGAGAAATTGCCAAACT
GCTTTCCACAGTGGCTGGACTAATTTACATTCCCACTAGCAGTGTATAAATATTCCCTTTTCTTTGCAGTATCACCAAC
AACTGTTACTTTTTGACTTCTTAATAATAGCCATTCTGACTGGTGTGAGATGATATCTCATTGTGGTTTTGATTTGCAT
TTCCCTAATGATTAGTGATGATGAGTATTTTTTCATATGCTTGTTGGCCGTGTAAATGTCTTATTTTGAAAAGTGTCTT
TGCCCACTTTTTAATGGGCTTGTTTGTTTTTTTGCTTGTCAATTTGTCTAAGTTCCTTATAGATTCTGGATATTAAACC
TTTGCCAGATGCACAATTTGTAAATATTTTCTCCCATCCTGTAGGTTGTCTATTTACTTTGTTGATAGTTTCCTTTGCT
GTGCAGAAGCTCTTTAGTTTAATTAGGTCCCACTTGTCAATTTTTGTTTTTGTTGCAATTGCTTTTGGCATATTCATCA
TAAAATCTTTGCCAGGGCCTATGTTTAGAATGGTATTTCCTAGGTTTTCTTCAATGGTTTTTATAATTTTACATTTTAC
ATTTAAGTGTCTAATCCATCTTGAGTTGATTTTTGTATATGATCTAAGGAAGCTGTCCAGTTTCAGTCTTTGGCATATG
ATTAGCCAGTTGTCCCAGAACCATTTATCGAATAGGGAGTCCTTTCCCCATTGTTTGTTTTTGTCAACTTTGTTGAAGA

Fig. 9.41

TCAGATGGTTGTAAGTGTGTGGGTTTATATCTGGGCTCCCTATTCTGTTCCAGTGGTCTATGTATCTATTTTTGTACCT
ATACCATGCTGTCTTGGTTACTGTAGCATTGAAGTATAGTTTGAAGTTAAGTGATGTGATTCCTCCAGCTTTATTCTTT
TTTGCTTAGAATTGCTTTGGCCATTTGGGCTCTTTTTGGGTTGCATATGAATTTTAGAATAGTTTTTCTAGTTCTGTA
AAGAATATCATTGTTCATTTGACAGGAATAGCATTGCATATGTAAATTGATAAATTCCTGAAAACATTCAACCTCTCGA
GACTGAACCAGGAAGAAATTTAAACCCTGATCAGACCAATAGCAAGTTCCAAAATTGAATCAGTAATAAAAAGGCTACC
AGCCAGAAAAAGCCTTGGACCACACAGATTCACAGCAAAATTCTANCAGACATATAAAGTAGAGCTGGTACCATTCCTA
CTGAAACTATTCCAAAAAATTGAGGAGGAGGAACTCTTCCCTAACTCATTCTATGAGGCCAGCATCATCCTGGCAAAGA
CAAAGCAAAGACATAACAACAACGTAAAAACTTCAGACCAATATCCTTGATGAACATAGATGCAAAAATCCTTAACAAA
ATACTAGCAAACTGAATCCAGCAGCACATAAAAAAAACTAATCCCCTCTCCCTCTCCCTCTCCCTCTCCCTCTCCTTCT
CCCCACGGTCTCCGTCTCCCTCTCTTTCCACGGTCTCCCTCTGATGCCGAGCTGAAGCTGGACTGTACTGCTGCCACCT
CGGCTCACTGCAACCTCCCTGCCTGATTCTCCTGCCTCAGCCTGCGAGTGCCTGCGATTGCAGGCCTGCGCCGCCACAC
CTGACAGGTTTTCGTATTTTTTTGGTGGAGACGGGGTTTCGCTGTGTTGGCCGGGCTGGTCTCCAGCTCCTAACNGCGA
GTGATCTGCCCAGCCTCGGCCTCCCGAGGTGCTGGGATTGCAGATGGAGTCTGGTTCACTCAGTGCTCAGTGGTGCCCA
GGCTGGAGTGCAGCGGTGTGATCTCGGCTCGCTACAACCTCCACCTCCCAGCCGCCTGCCTTGGCCTCCCAAAGTGTCG
AGATTGCAGCCTCTGCCCGGCTGCCACCCCGTCTGGGAAGTGAGGAGCGTCTCTGCCTGGCCGCCCATCGTCTGGGACG
TGAGGAGCCCCTCTGCCTGGCTGCCCACTCTGGAAAGTGAGGAGCGTCTCTGCCCGGCCNCCATCCCATCTAGGAAGTG
AGGAGCGCCTCTTCCCGACCTCCATCCCATCTAGGAAGTGAGGAGCGTCTCTGCCCGGCCGCCCATCGTCTGAGATGTG
GGGAGAGCCTCTGCCCCGCCGCCCCGTCTGGGATGTGAGGAGCGCCTCTACCCGGCCGCGAACCCGTCTGGGAGGTGAG
GAGCGTCTCTGCCCGGCCGCCCCATCTGAGAAGTGAGGAGACCCTCTGCCTGGCAACCGCCCCGTCTGAGAAGTGAGGA
GCCCCTCCGCCCGGCAGCTGCCCCGTCTGAGAAGTGAGGAGCCCCTCCGCCTGGCAGCCACCCCGTCTGGGAAGTGAGG
AGCGTCTCCGCCCAGCAGCCACCCTGTCTGGGAGGGAGGTGGGGGGGTCAGCCCCCCGCCCGGCCAGCCACCCCATCCG
GGAGGGAGGGGCGCCTCTGCCCGGCCGCCCCTACTGGGAAGTGAGGAGCCCCTCTGCCCGGCCACCACCCCATCTGGGA
GGTGTACCCAACAGCTCATTGAGAACGGGCCATGATGACAATGGCGGTTTTGTGGAATAGAAAGGGGGGAAAGGTGGGG
AAAAGATTGAGAAATCGGATGGTTGCTGTGTCTGTGTAGAAAGAGGTAGACATGGGAGACTTTTCATTTTGTTCTGTAC
TAAGAAAAAATTCTTCTGCCTTGGGATCCTGTTGATCTGTGACCTTACCCCCAACCCTGTGCTCTCTGAAACATGTGCTG
TGTCCACTCAGGGTTAAATGGATTAAGGGCGGTGCAAGATGTGCTTTGTTAAACAGATGCTTGAAGGCGGCATGCTCGT
TAAGAGTCATCACCACTCCCTAATCTCAAGTACCCAGGGACGCAAACACTGTGGAAGGCCGCAGGGACCTCTGCCTAGG
AAAACCAGAGACCTTTGTTCACTTGTTTATCTGCTGACCTTCCCTCCATTATTGTCCTATGACCCTGCCAAATCCCCCT
CTGCGAGAAACACCCAAGAATGATCAATAAAAAAAAAAAAAACAAACAAACAAAAAACAAAACACAAACAAAAAAGAAAG
GTTTGAGCTAAGAACTTGCAGGAGACAAGGAAATTAGTCAAGCAGAAGGATATCTGGGGGAATGGCATGCGAGGCAGAA
GGGAAAGCTAGGGTCGAGGCCCTCAGGGAAAGAAGCAAGGCCAAGGGGCTGGAGTAGAGGGAGGAAGAGGGGAAGTAGT
GGAAGATGAGACTAGCTTTACTACTGATTATGATGTAAGAATAGTGGCCAGTTTCCTTTCCAACTTGGGCCCGGCAGAA
TGGCTCCTGCAAAGAAGGGTGATGAGAAGAAGAAGGGTCATTCGCCATCAACGAGATGGTGACCCGAGAATATCCCATC
AACATTCATAAGTGCATTCATGGAGTGGGCTTCAAGAAGCGTGCCCCTCAGGCACTCAAAGAGCTCCGGAAACTTGCCC
TGAAGGAGATGGGAACTCCAGATGCACACTTTGATACCAGGCTCAACAAAGCTGTCTGGGCCAAAGGAATAAGCAACGT
CTCATACTGTATCCATGTTCGGTTGTCCAGAAAATGTAATGAAGATAAAGATTTACCAAACAAGCTCTATACTTTGGTT
GCCTACGTACCTGTTACCACTTTAAAAAAATCTACAGTCGGTGTGAATGTGAACTAACTGCTAATCATCAAATATACCA
AATAAAGTTATAAAATTGTTTAAAAAAAAAAACAAAAAAAAAAAAACTAATCCACCACCATTGAGCAGGCTTTATCCCT
AGGATGCAAGACTGATTTCAACATATGCAAATCAATAAATGTGATTCACCACATGAACGGAATAAAAACAAAAAAACACA
TGATCATCTCAATAGATGCAGAAAAGGCTTTTGATAAAATTCAGCAACCTTCATGTTAAAAACCTTCAAAAAACTAGGC
ATTGAAGGACATACCTCAAAATAGTAAGCCATCCACAACAAAACCCACAGCCAACATCACACTGAATGGGCAAAAGCTG
GGAGTATTCCTCTTGAGAACTGGAACAAGACAAGGATGCCCACTCTCACTGCTCCTATTTAACATAGTATTGGAAGTCC
TAGCCAGAGCAATAAGGGAAGAGAAAGAAATAAGAGGCATCCAAATAGGAAGAGAGAAAATCAAACTACCTCTGTCAAA
CTACCTAGAAAACCCCATAGTTTTGCCCAAAAGCTCCTAGATAACTTCAGCAAAGTTTCTGGATACAAAAATCAGTAGC
ATTTCTCTACACCGATAATGTCCAAGCTGAGTGCCAAATCAAGAGCATAATCCTATTCACAATAGCCACAAAAAAATAAC
ATATCTAGAAATATAGCTAACCAGTGAAGTGAAAGAGCTCTCCAATGAGAATTACAAAACACTGCTGAAAGAAATCAGA
GATGACATAAACAAATGGAAAAACATTCCATGCTCATGGATAGGAAGAATCTCCTCTGAAATCTTATAGCTAGAGAAAC
CATAACATTTATCATACAAATTTGGCATTTTTTGAGGGTGAATGAATGGGAGAACTATTAGTAGTCACATTGGGACAAT
AATCATAAACTGGAACTATCCTGTGTAAACTGGATGTATTGTCACCCAAGTTATTGCCTTTTGGGATCCTAACTGTTAG
TATCAAGGACTTTGGACCGAAGTCTGTCTGGTTCCAAATTCTGGTTCTCAGCATGACTTTGAGTAGATTATTATATCCT
TTGCCATTCACTTATTCTTTTTATAGCTTCTTACTAAGCTTGTATTAGATGTGTGCAAATTGTAAGGCATTGGTAACAC
AATGGTAAATAATATTTATGGTTTGTGCTGTCATGAAGCTTACATCCAACTTTATCTACAAAGTGGGGCCAAGGATACC
TACATTATGAAAATTCTTTATATCATCGTGAGAAGTAAATACTATTTGTGAAGCATTTAGTAGGATTTTCAGTATATAG
GAAGTCCTCAGTGATAACTATAATTTTATTTGTATTTTTCATATGCCATTTTGTTGCATAGTCGCATGTATAATTGTAA
GGTTTTTGAGAGTAGGAGGCAAGGCTTATGAACATTTACATACCTTCAGGCATCAGTATAGTAGCCTCTCATTGCATGA
ATGAATTTATTGAGTGAATTCCACTAAACACCAGGTATCAAACTTTTTTTTTTTCTCATTATCTCTTCTGTTTTTTGTT
CCTCTGTTGTTTCTTTCCTGCTCTTTTCAGAGCATTTGAATATTTTTTAGTGTGCCATTTTATTTTTTCTATTGGCTTT
TAGTTATACCCCCTTATCTCTCTGTTTATCATTTATCTTCCTTTTTAATTTAATTTTCTTGATTGCTCAAGGGCTAAAA
ATATGCAGCCCCTATGCATTAGAATCTATTCATACTCAGTATTGTACCTCTCCACATTTCACACTTAACATTTGACAAA
TGTAGTAAACTTACAACATTTTATTTCAATTTAGTCATCCTCTTTCTTTTATTTTCTTTTTATTTTTTTGAGACAGGGT
CTTGCTCTCACCCAGGCTGGAGTGCAATGGCACAATCATGGCTTACTGTAGCCTCAAACTCTGGGGCTCAAGCAGTCCT

Fig. 9.42

CCTGCCTCGGCCTCCTGAGTAGCTGGGACTCAGTCATGTGCCACCACACCTAGTTAATTTTTTATTTTTATTTTTAGTA
GACATGAAGTCTCACTATATTGCCCAGGCTGGTCTCAAACTCCTGGGCTCAAATGATCCTCCCTGCTCTGCCTCCCAAA
GTGCTGGGATCACAGGCATGAGCCACAACACCTGGCCTCATCTCCCTTTCTTTGTATGGTTATTGTCATATTCATTATT
TTAACATGTCATAACCCCAACCTTAGAGTGTTTTCACTTTTGCCTTAAATAGTAGTCTTTAAGGAAATTCTAAGAAAGA
AAACATACTACTTTATATTTAGTAATTTACTTAACATTTCCAGTGCTCTTTTTCTTTCTTACTGTAGATCTGAATTTCC
ATCTGGTATCAGTTATCTTCAACTTTTTGTATTTCTTATAGTGTAGGTCTGCTGGTGATTAATTTTCTCAGCTTTTATT
TATCTGAAAGTGCCTTTATTTCTTCCCATTTTGAAGAATATTTTTGTTGGTTGTAGAGTTCTGAGTTAACAGCTTTG
TTTTCGTTTTTCCTTTCAGCGATTTAAAAATTCCATGCCATTGGGGTTTTCAGTCCCCACTGTTTCTCATAAGCCCATG
ATCATTCTTATCCTTGTTCAACTGTACGTAATGTGTGTCTTTCCTCTGGATGCCCTTAATATTTCCTCTTTATCTTGGA
TGTGCTGCAGTTTTATTACAATGTGCCTGGGTGTGGTTTTCTTTATATTTATTCTTCTTGGGGTTTGCTAAACTTCTTG
GATCTGTTTGATCGTTTTGAAAAGTTTTCAGCTGTTATTCCTTCAAATATTTTTTTCTGGCCCATTCTCACTCGCTTTT
CTTTCTAGGATTCCAATTACATTTACGTTAAGACTATTTGGTATTGTCCTACCTATTCCTGAATCTTAGTTCATCTTCC
TGATTATTTTCCCCACTCTTCCTTTCTAAGATTAAATAATTTCTACTGATCTGTTTAGGTTCTCTTTTCTTCTGCCAT
CTCTAATCAGCTATTCAGACCTGTCCACTAAATTGTTCATTTTTATTTTTTTTAGTTCTAGAATTTTCATTTGGTTAT
TTTCTCTGCCTAGACTCCTCTATTCACTCCTTGAGATCATATTTCCTGTCATTCTTTGGACATATATATTTAAAATTCT
TTAACATATTTACAAAAGCTGCTTTAGATTCTTTGTTTGGACATATCTGGGTAATTTTGAGATTTGTTTGTATTTACTG
CTTTTTTGCTTGCCTATGTATCATATTTTCATTTTTTTAAATTATGCTTTAAGTTCTAGGGTACATGCGCACAGCGTGC
AGGTTTGTTACATATGTATACATGTGCCATGTTGGTTTGCTTCACCCATCAACTCATCATTTACATTAGGTATCTCTCC
TAATGCTATCCATCCCCCACCCCCCACACCCCCCCAACAGGCCCTGGTGTGTGATGTTCGCCACCCTGTGTCCAAGTGT
TCTCATTGTTCAATTCCCACCTATGAGTGAGAACATGTGGTATTTGGTTTTCTGTCATTGTGATAGTTTGCTGAGAATG
ATGGTTTCCAGCTTCATCCATGTCCCTGAAAAGGACATGAACTCATCCTTTTTCATGGCTACATAGTATTCCATGGTAT
ATATGTGCCACATTTTCTTAATCCAGCCTATCAATGATGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATAG
TGCCGCAATAGACATACGTGTGCATGTCTTTATAGTAGAATGATTTATAATCCTTTGGGTATATACCCAGTAATGGGAT
GGCTGGGTCAAATGGTATTTCTAGTTCCAGATCCTTGAGGAAACGCCACACTGTCTTCCACAATGGTTGAACTAATTTA
CACTCCCACCAAGTGTAAAGGCATTCCTATTTCTCCACATCCTCTCCAGCATCTGTTGTTTCCTGACTTTTTAATAATT
GCCATTCTAACTGGTGTGAGATGATATCTCATTGTGGTTTTGATTTGCATTTCTCTGATGACCAGTGATGATGAGCATT
TTTTCATGTGTCTGTTGGCTGCATAAATGTCTTCTTTTGAGAAGTGTCTGTTCATATCCTTCGCCCACTTTTTGATGGG
GTTGTTTGTTTTTTTCTTGTAAACTTGTTTAAGTTCTTTGTAGATTCTGGATACTAGCACTTTATCAGATGGGTAGATT
GCAAAAATTTTCTCCCATTCTGTAGGTTGCCTGTTCACTCTGATGGTAGTTTCTTTTGCCATGCCGAAGCTCTTTAGTT
TGATTAGATACTATTTGTCTATGTTGGCTTTTGTTGCCATTGCTTTTTGGTGTTTTAGTCATGAAGTCCTTGCCCATGC
CTGTGTCCTGAATGGTATTGCCTAGGTTTTCTTCTAGGGTTTTTATGGTTTTATGTCTAACATTTAAGTCTTTAATCCA
TCTTGAATTAATTTTTGTATAAGGTGTAAGGAAGGGATCCAGTTTCAGCTTTCTACATATGGCTAGCCAGTTTTCCCAG
CACCATTTATTAAATAGGGAATCCTTTCCCCATTTCTTGTTTTTGTCAGGTTTGTCAAAGACCAGATGGTTGTAGATGT
GTGGTGTTATTTCTGAGGCCTCTGTTCTATTTCTTGGTCTATATCTCTGTTTTGGTACCAGTACCATGCTGTTTTGGTT
ACTGTAGCCTTGTAGTATAGTTTGAAGTCAGGTAGCGTGATGCTTCCAGCTTTCTTCTGTTGGCTTAGGATTGTCTTGG
CAACGTGGGCTCTTTTTTGGTTCCATATGAACTTTAAAGTAGTTTTTTCCATTTCTGTGAAGAAAGTCATCGGTGGCTT
GATGGGGATGGCATTGAATCTATAAATTACCTTGGGCAGTGTGGCCGTTTTCACAATATTGATTCTTCCCATCCATAAG
CATGGAACGTTCTTCCATTTGTTTGTGTCCTCTTTTATTTCGTTGAGCAATGGTTTGTAGTTCTTCTTGAAGAGGTCCT
TCACATCCCTTGTAAGTTGGATTCCTAGGTATTTTATTCTCTTTGTAGCAATTGTGAATGAGAGTTCACTCATGATTTG
GCTCTCTATTTGTCTGTTATTTGTATATCAGAATGCTTGTGATTTTTGCACATTGATTTTGTATCCTGAGACTTCGCTG
AAGTTGCTTATCAGCTTAAGGAGATTTTGGGCTGAGATGATGGGGTTTTCTAAATATACAATCATGTCATCTGCAAACA
GGGACAGTTTGACTTCCTCTTTTGCTAATTGAATTCCCTTTATTTCTTTCTCTTGCCTGATTGCCCCAGCCAGAACTTC
CAACACTAAGTTGCATAGGAGTGGTGAGAGAGGGCATCCTTGTCTTGTGCTGGTTTTCAAAGGGAATGCTTCTAGTTTT
TGCCCATTCAGTATGATATTGGCTGTGGGTTTGTCAAAAATTGCTCTTACTATTTGGAGATACATTCCATCATTATGTA
GTTTATTGAGAGTTTTTAGCATGAAGGGCTATCGAATTTTGTTGAAGGCCTTTTCTGCATCTATTGAGATAATCATGTG
GTTTTTGTCATTGGTTCTGTTGACGTGATGGATTATGTTTATTGATTTGAGCATGTTGAACCAGCCTTGCATCCCTGGG
ATGAAGCTGACTTGATTGTGGCAGATAAACTTTTTGATGTGCTGCTGGTTTCAGTTTGCCAGTATTTTATTGAGGATTT
TCTCATCGATGTTCATCAGGGATAATGGTCTAAAATTCTCTTTTTTTGTTGTGTCTCTGCCAGGCTTTGGTATCAGAAT
GATGCTCATAAAATGAGTTAGGGAGGATTCCCTCTTTTTCTTTTGATTGGAATAGTTTCAGAAGGAATGTTACCAGCTC
CTCTTTGTACCTCTGGTAGAATTCAGCTGTGAATCCATCGGGTCCTGGACTTTTTTTGGTTGATAGGCTATTAATTATT
GCCTCAATTTCAGAGCCTGTTATTGATCTATTCAGGAATTCAACTTCTTCCTGGTTTATTCTTGGGAGGGTGTATGTGT
CCAGGAATTTATCCATTTCTTCTAGATTTTCTAGTTTATTTGTGTAGAGGTGTTTATAGTATTCTCTGATGGTAGTTTG
TATTTCTGTGGATCAGTGGTGATATCACCTTTATCATTTTTTATTGCATCTATTTGATTCTTCTCTCTTTTTTTATTAGT
CTTGCTAGCAGTCTATTTTTTTGATCTTTTCAAAAAACCAACTTCTGGATTCATTGATTTTTTGAAGGGTTTTTTGTGT
GTCTCTATCTCCTTCAGTTCTCCTCTGATCTTAGTTATTTCTTGTCTTCTGCTAGCTTTTGAATTTGTTTGCTCTTGCT
TCTCTAGTTCTTTTAATTGTGATGTTAGGGTGTCGATTTTAGATCTTTCCTGCTTTCTCTTGTGTGCATTTAGTGCTAT
AAATTTCCCTCTACACAGTGCTTTAAATGTGTCCCAGAGATTCTGGTATGTTGTGTCTTTGTTCTCGTTGGTTTCAAAG
AACATCTTTATTTCTGCCTTCATTTCATTATGTACCCAGTAGTCATTCAGGAGTAGGTTGTTCAGTTTCCATTTAGTTG
AGCAGTTTTGAGTGAGTTTCTTAATCCTGAGTTCTAATTTGATTGCATTGTGGTCTGAGAGACAGTTTTTTGTAATTTC
TGTTCTTTTACATTTGCTGAGTAGTGCTTTACTTCCAATTATGTGGTCAATTTTAGAATAAGTGTGATGTGGTGCTGAG
AAGAATGTATATTCTGTAGATTTGGGGTGGAGAGTTCTGTAGATGTCTATTAGGCCCGCTTGTTGCGGAGCTGAGTTCA

Fig. 9.43

AGTCCTGGATTTCCTTGTTAACCTTCTCTCTGGTTGATCGGTCTAATATTGACAATGGGGTGTTAAAGTGTCCCATTAT
TATTATGTGGGAATCTAAGTCTCTTTTTAGGTCTCTAAGGACTTGCTTTATGAATCTGGATGCTCCTGTATTGGGTACA
TATATATTTAGGTTAGTTAGATCTTCTTGTTGAATTATCTCTTTACCATTATGTAATGCCTTTCTTTGTCTCTTCTGAT
CTTTGTTGGCTTAAAGTCTGTTTTGTCAGAGACCAGGATTGCAACCCCTGCTTCTTTTTGCTTTCCATTTGCTTGGTAG
ATCTTCTTACATCCCTTTATTTGAACCTATATGTTTCTCTGCATGTGAGATGGGTCTCCTGAATACAGCACACTGATG
AGTCTTGACTCTTTATCCAATTTGCCAGTCTGTGTCTTTTAATTGGAGCATTTAGCCCATTTACATTTAAGGTTAATAT
TGTTATGTGTGAATTTGATCCTGTCATTATGATGTTAGCTGGTTATTTTGCCCATTAGTTGATGCAGTTTCTTCATGGT
GTCGATGGTCTTTACAATTTGGCATGTTTTTGCAGTGGCTGGTACCAGTTGTTCCTTTCCATGTTTAGTGCTTCCCTCA
GGAGCTCTTTTAGGGCAGGCCTTGTGGTGACAAAATCTCTCAGCATTTGCTTGTCTGTAAAGGATTTTATTTCTCCTTC
ACTTACAAAGCTTAGTTTGGCTGGATATGAAATTCTGGGTTGAAAATTTTTTTCTTTAAGAATGTCGAATATTGGCCCC
CACTCTTTTCTGTCTTATAAGGTTTCTGCCGAGAGAGCTGCTGTTTGTCTGATGGGCTTCCCTTTGTGGACAACCCGAC
CTTTCTCTCTGGCTGCCCTTAACATTTTTCCTTCATTTCAACCTTGGTGAATCTGAAAATTATGTGTCTTGGGGTTGC
TCTTCTTGAGGAGTATCTTTGTGATGTTCTCTGTATTTCCTGAATTTGAATGTTGGTCTGCCTTGCTAGTTTGGGGAAG
TTCTTGTGGATAATATCCTCCAGAGTGTTTTCCAACTTGGTTCCATTCTCCCCGTCACTTTCAGGTACATCAATCAGAC
GTAGATTTGGTCTTTTCACATAGTCCCATATTTCTTGGAGGCTTTGTTTGTTTCTTTTTACTCTTTTTTCTCTAAACTT
GTCTTCTTGCTTTATTTCATTCATTTGATCTTCAGTCAGTGATATCCTTTCTTCGACTTGATCTAACAGGCTATTGAAG
CTTGTGCATGCATCACGAAGTTCTCGTGCCATGGTTTCAGCTCCATCAGGTCATTTAAAGTCTTCTCTACACTGTTTA
TTCTAATTTGCCATTCGTCCAACATTTTTTAAAGATTTTCAGCTTCCTTCAATGGGTTAGAACATGCCCCTTTAGCTTG
GAGAAGTTTGTTATTACCATCCTTCTGAAGCCTACTTCTGTCAACTTGTCAAAGTCATTCTCCGTCCAGCTTTGTTCCA
TAGCTCGTGAGGAGCTGTGATCCTTTGGAAGAGAAGAGGCACTCTGGTTTTTAGAATTTTTAAATTTTCTGCACTGGTT
TCTCTCCATCTTTTTGGTTTTATCAACCTTTGGTCTTTCATGTTGGTGACCTACAGATGGGGTTTTGGTGTGGATGTCC
TTTTTGTTGATGTTGATGCTATTCCTTTCTGTTTGTTAGTTTTCCTCCTAACAGTCAGGTCCCTCAGCTGCAGGTCTGT
TGGATTTTGCTGGAGGTCCACTCCAGATCCTATTTGCCTGGGTATCACCAGTGGAGGCTACAGAACAGCAAATATTGCT
GCCTGATCCTTCCTCCATAAGCTTCGTGCTAGAGGGGCACCTGCCTGTGTGAGATGTCTGTCAGCCCCTACTGGGAGGT
GTCTCCCAGTTAAGCTATGTGGGGGTCAGGGACCCACTTGAGGAGGCAGTCTGTCCGTTCTCAAAGCTCAAACGCCATG
CTGGGAGAACCACTGCTCTCTTCAGAGCTGTCAGACAGGGATGTTTAAGTCTGCAGAAGCTTCTGCTGCCTTTTTTTCA
GCTATGCCCTGCCCACAGAGGTGGAGTCTATAGAGGCAGTAGGCTTTGCTGAGCTGTGGTGGGCTCTGCCCAGTTCCAG
CTTCCTGGCCACTTTGTTTACCTACTTAAGCCTCAGCAATGGTGAACACCCCTCCCCCCACCAGGCTGCTGCCTCGCAG
GTCAATCTCAGATTGCTCTGCTAGCAATGAGCAAGTCTCCATGGGTGTGGGACCTGCTAAGCCAGGCACAGGAGAGAAT
CTCCTGGTCTGCTGGTTGCTAAGACAGTGGGAAAAGCGCAGTATTTGGGCGGGAGTGTCCTGTTTGTCATGGCTTCCCT
TTGCTAGAAAAGGGAAATCCCCCAACCCCTTGTACTTCCCAGGTGAGGCGATGCCCCACCCTGCGCTGGCTCCCGCTCC
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GAATTTGCTTGTTATCTTAGCATGCTGTTCAATTGGCTGATCACGTTGAACATGTTTAAGCATGGTTTTAGGCTTTGT
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GGTACCAACTTTCTGTTTCTCAGGTAGATCCCAGGGGTGTCAAAGTAGTATTTATTTATGAGCTCTCTCAAACCCATAG
GACCTGAACTGCAATGATGTCTAGTACTATTCTTCTTCCAGCATTACTTGACCTCCACTATTTCTGTTCTCTCAACCTG
ATAACATTTTCTCTCTGTTAAGCCTCCAGTATTCTCACTCTGCAAATGTATGGTGGTGATCTCAGTCACAGATTTGTCC
CATGTCTGGGACAAATCTCTGCAAAACTTCTGAGACTTCTCTGTGTTAAAGTCTTTACTCTCTAAGACTCTGCTTTATA
GATGCCAGCCATGCCAGCTGCCTCAGACTCCAGCTCTTTTTGTCATGTTTAGGAAAATATCCTTATTCACAGAGGTGGA
CATTCGTGGGCAGAGGGATTTCAGTTCTGGATTGGCTTGTTAGCCACTGTTTGAAAACGGTTTCCTCATATATTTTACT
TAGTTTTGTAAGTATTTTCTGTGAGACAGATAATCTGTTACTAGTTACTCTATCATAGCTGGAAGCAGAAATATATAGG
TATCAATTTGATTTGCAATTGTTTCTAGTTTACAATGCATTCTGCCTATCTTAAAAAATTGTAATTCTAATCATTTTA
TTTTTGATCAGGGAATGTATTTATTGATTCACATGAATAAAATTCAAAGGCTATAGAAGAATATGTAGCAAAAAATCTC
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TTTAGATATATATGAAATCCTCTCCCTCTTCTTATTTCCTCACATAAATGATAGCATGATGTGCATACTTTATATTTT
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GGTTATTATAAACAATGCTTCATGAACTACTTTGGGTAAACCATTTGGTATATGCCAGTATATCTGTAGGATACATTCA
TAAAAGTGCAATTGCTACCTGAAAATGTATGCACATTTGTTACTTAGTTAAATGTTGCCAAATTTCCCTCCAGCAGCTG
TGTTAGTGGCTGTAGCCTCGTTAAAAATGTATGGGAGGAATGCTGACATTTTTGTTTTACCTGCAGTATCCATTTTCTC
CATGGTACATCTACAAAATTGGCTTCTATTTTTTATTCTTATGTTTATCTTAATCTTTTAATAATCTTTCCCTGATTAA
CTTACAAGTTTCTTGTTATAACAAATAAGGGGGCTAAGGGGGAGGGGGATGGTTAATGAGGAAAAAATAGAAAGAATGA
ATAAGACCTACTATTTGATAGCACAACAGGGTGACTAGAGTTAGTAACTTATTTCTACAATTAAAAATAACCGAGAGTG
TAACTGGATTGTTTGTAACACAAGTGATAAATGCTTGAGGGAATGGATACTCCATTCTCTATGATGTGATTATTTCACA
TTGCATGTCTCTGTGTAAACATCTCATGTACCCCATAAATATATTATACCTACTATGTACCCAGAACAATTAAAAATAA
AAAAATTTAAAGTACAAAAAAAGACAAAAAGAGTCACACAGAAAATAAAGGAAAATAGTCTATAGAAGGATAAAAAACA
AAACAAAAAAACAAATAAGATAAGCAGCAGCGATTTATATAAATTAGAGTTATTATTATTACTGTGGTTGCTGTGGTTG
ATTTTCCTAATATTCCAGGGCACGAATCAGCTGATAATATCCATTTTAAAAGTGCAATTTTATTTCCATTTTAGTCAGT

Fig. 9.44

CTGATTTTCAAATTATTCTCCCCTTTTTGTGCTTTAAAAATAGGGGTATAACATATGCTAGCCTGTTCCCAATTTGAAC
TCGTGTCTTTCAAATGCACAGTCTAACTTTATTAATTCTGTATGGAATCATGTCCTGTGAGCTTTCTAGCTTTTCTTTC
TTTCTTGTTTTTTTTCCTTTACCTCACTTGCTCTTCTGAATTTGAGGAGCTAAAGATATTTGTGACAAGACTTAGCTAC
TCAATGAACATTCCGAATCAATGTTTTCCTGTGGAAACAGTGACTCTGATGGAATCTTCTCCACTTCCTGGAACATTAA
ATTGTCACTAGGTAATTCAGGAGTCTCTTTTTCAGGTTCTTGTCTGCAGTATACTGAAAAGTGAATTGTGACCTCATTG
TTATGAAATTTGGAAGTGTTTATCTTTAATGTTAGCTTAGAGTGTTTTTTTTCCCTCTCTCTTGCATTCCCTTTAAAC
CCTGACCATTTAAACATTATAGACAAGGACATTTCTCATGTGTTTGTCTTTCTCTAAATCTGTTAGTACTTTAAACTGT
GTGGTCCCAACACGATGTTGTACTATACTTGTGGAATCAACACTCAAAAGAGCCCATTCAGAAGAGTTTTTTTTCTTCT
TCTTGGTAACTGCTTTCTAAAAAAAATTCTTCTTTATATTCTAAAGCTCTAAGCCCCCAAGCCCCATCCTCCCATGTTG
AGATTCCTGTTGCCACCTGCCTTTGACTCTTCTATGTCCTCCTGTCAAATACCCTTCCTGGCCTATTGTTCCAACTTAT
TATAAAACACTGTAACTGAATGGCTTGAAAAGATGTTGCGAATGTAGTTGATTTTTCCTCTGAGAAACAAGTGTGTTAG
CTTCTTTGGAGAATGTATTAACTGGTACTACTGGCACTACTAAGCTCTAGGCTTAGAACTGTGTGAGGGAAACAAAAAA
CAGAACAAAGATATGCAGAAGTCTGGTTTTTGCCCTCCAGGAGTGCAATGGTTGTGAGTGTAGGATCTGAACTCAAGCA
GACAGATGTAGGCTGGATGATCTTGGGTGAGGTACACTAAATCTCAGTTCTCTCATCCGTGATACAATTGTACTCATCT
CACAGATTAAACAAGATAAATCTGTGGGGAGAATCCGCCCCAGAATTGAGAGAGGCTGTTCTCTGGGCACACTTGCTTT
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TTCATGTTCTGGCTGTTCTGGCAGTACAAATGAGTCTGGACATCTACTTCAGGTAAATTGGATGTTTGATTAATTAATA
ACCATGTAGGCCATTTGTAGATGGAATCGCACAGTGTGATTAGTCATGGTAGCATGAAGACTTTAACAGGCCAATCCCT
ACATCTCAATGGCTTTATATATTACATATTTATTTCTTGTTCGTATCACATTACAATGTGGATTGGGGGTAAAGTGGGA
CACAGCATGTTCCACAAAGTTATTCAGATTCCCAAGCTGTTTTTACCTAGTTCATTATCCTCTAAAGCCCCAGAGTCTT
GGATATTAATTTCTCTGAAGGAAGAGTGTATGATAGTGTGTCCAGAATTGGTGGGCTCTTGGTCTCACTGACTTCAAGA
ATGAAGCCGCGGACGCTCATGGTGAGTGTTACAGTTCTTAAAGGCAGTGTGTCCAGAGTTTGTTCCTTCTGATGTTCGG
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TGTTACAGCTCTTAAGTCAGGGTGTCTGGAGTTGTTCGTTCCTCCCAGTGGGTTTGTGGTCTCGCTGGCTTCCGGAGTG
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TGCAAAGAGTGAAAAAACAAAGCTTCTACAGTGTGGAAGGGGACCCCAGCAGGTTGCCACTGGTGGCTCAGGCAGCCTG
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AGAGCTGATTGGTCTGTTTTGACAGTGTGCTGATTGGTGCATTTACAATCCTTGAGCTAGACACAAAAGTTCTCCATGT
CCACACTAGATTAGCTAGATACAGAGTGTCGATTGGTGTATTTACAAACCCTGAGCTAGACACAGAGTGCTGATTGGTG
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GTGTGTTTACAAACCTTGAGCTACATACAGAGTGCTGATTGGTGCATTTACAATCCCTTAGCTAGACATAAAGATTCTC
CAAGTCCCCACCAGACTCAGGAGCCCAGATGGCTTCACCCAGTGGGTCCCGCACCGGGCGGCAGGTGGAGATTCCTGCC
AGTCCCGCGCCCTACGCCTGCACTCCTCAGCCCTTTGGCAGTGGATGGGACTGGGCGCCCTGGAGCAGGGGGCAGCGCT
TGTCAGGGAGGCTCGGGCTGCACAGGAGCCCATGGTGGGGGTGTGGGGAGACTCAGGCGTGGCCGCACTGCAGGTCCCG
AGCCCTGCCCCGTGGGGAGGCAACTAAGGCCTGGTGAGAAATTGAGTGCAGCAGCTGCTGGCCCAGGTGCTAAGCCCCT
CACTGCCCGGGGTGGCGGGGCCGGCCTGCCGCTCCCAGTGCGGGCCCACCAAGCCCACGCCCACCGGAACTCGCACTGG
CCTTCAAGTGCCTGCCGCGCAGCCCCGGTTCCCGCCTGCACCTCTCCCTCCACACCTCCCCGCAAGCTGAGGGCGCCGG
CTCCGGCCTTGGCCAGCCGAGAAAGGGGCTCCCACAGTGCAGGGGAGGGCTGAAGGGCTCCTCAAGCACGGCCAGAGTG
GGCGCCAAGGCCAAGGAGGCGCTGAGAGCCAGCAAGGGCTGTGAGGGCTGTCAGCATGCTGTCACCTCTTAATAGGTGG
TTTGGAGGTTTTAGGAACCAGGTCTGGATGGGGTACATATGACTTACATTCACATTCTATTGGCTAGAACTTGTCTCAT
AGCCTGATCAGATGCAGAGGGTCTAGGAAATAGGTGCTGAAAGAAGGGAACCCATGCACATTAATGAGTACCATTGATT
GCTCCCTTTCAGTGGCACTTTAAAGGTTTGGACTTCCAGTTGTCTCACCCAGGTTGAGTGCAACCACTTAGGCATTCCT
ACCATGTGACAAGGTACTGGCATCTAGCTTGATGTGGGTCTGCCCAATGGCAAATGATTACCCTAAGACTCAAATTTCA
TTTCCCTTCTTCCTGTGTCTTAACCAAGGAGAGATTTTAAAACGTATACCAGAGACGAAGAGGCACTTTGAATTTGTCC
GGGTAGGTGCTTCTTGGTTTGGGGATGTTATGACCTTAGATAGGTAAGTGAAGGCTGTCATGTGGAATGACTCCCAGAT
TTAATGTAATTCCATTACAAGTAGGTTTACATAAGAGGCACAACTTTGTTTCTTGGTTATTCCTTATTACCATATTTAT
AACACTTAAAAGAAAGAGTTCAGAAAATAGCTAGGATTGGTTTACTCCAGATACCTGGAGTGTTAACCAGCAAACTGCT
TTGTAGCCTTGTGTGTACCAACAGAAGTAGGTTGCATATTCTGTCTTTTCTTTCTCCTTGAAAGCAATACTTTGCTGAT
CTTTAACTTATATATGTCCCTTGGAATGATGCCAGGGAGAATTTTTATAATAGGTCCAAATTATAGTTGCCTGTCTTTG
TGTGTGTATGTATATTTAACTTTTTAATTTGATTTTATTTTTAAGTAGCTTTATCTCTGGATGGGCAATGCATATCTTA
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TTTGTTTTTATGACTATTATTTGCATTCTCTAGGGAGGCAGATTAACACATAAAAACTACCTAAAGAATATAAAAACAA
TGTATGGATAATATGGCAGAAATGGTATATAATTGGTATAAAGTACAAAACCAAGGACTGCTAGTGCACAGAAGCTTTG
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TAAGGAATACATGACCCCTTCTGCTTACCTTCGAAAGGGGAGAAATTGTATCTGTCGAGAAACTTGGTGGAACAAACAG
AAGTGCATGCAATTAATTGTAAGACATAGGGCATCGGTTCTGTTTTCTATTTTAGAACTGTAAAAAGTTTGACAAAGTG
AACCTGAACTCTGATAAAGCAGCAAGAAAAATCTGGAAGTGTTCTTTGGGTTAGGAGATGCTTATAACTGGTTGGATGG
AAATAGTAGTTACATTAAGATTATTTGTTACTTTGGGATCTGATGCAGGGCTGAAACAACCCAATGTAAGTCAATGATA
CTTTCACCAGATTGAAGTTTCTAAGCTGTTTTTCCAAAAAAAAAAAAAAAATAAACGAAAAAAGAAATTCAAAATTAAAA
CAAACCACTCCCAAATTCTCTTACATCCATGGCATTCTGAATTTATAAGGATAGGCTTTGGCCCTTTTAGAATCTGGTT
TTATGAAGGTGGAAGGAATGACAAGGCTTAGTGCAAAATATTAAAAGTACCTTATGCCCTTTTACCAAGTGTGCACCAC

Fig. 9.45

TGCGTTCCTGAGTCTGTGTAGTCTTCCCATCTATTTCTCCTTTCGTTTCTTCCTCCTTCTCCTTCCTCCTTCCTCCTCT
CATCTTCAGAAAATGAAAGGCTCTGGAAGTCTATTGTGTGTGAGTACCTTTGGGACCAATGTAAAACATAGAGCAATAT
GCATGCAAGGGATGCTTCTCCTTCAGATTGGAAAAAAAGTGGATTTAAATGAAAACAGACCTGACAATATACCTTTTTC
TGCCTATAGGTTTGATGAGGTAATGTTATAAAGTATATTGCTCTCTAAAAATCCTGAGGGTTTTGAGTGAATGATGTA
ATGAAAGTAAGCTACAGTAGTCAGTAGGAATATAATCTAGGAAGTATGTCCTGGGATAAATAAAACTGTTGATAGCATG
AACGTTATGTGCTTGTGAGCTCAGCTAGTGAGGGGATGAAGGAGCTTGCATTTATTAAATAGCTTAGTTAAATGAATTA
TACATATATTCCATGACTTCAACTATATAATGTTGTAGTTAAAGTCATCATTTTAGAATCAGACTGAAGTGGATCTAAA
TCCTGGTATTATGACTTAATATTCACCTAGTCATTAGCAAATGACTCCACCTCTAGCCTAGCCTTAGTTTCCTTATCTA
TAAAAAGTATTTGATTAAAACCTACCTTAAGGATTTGTTGTAAGGGTTATAGGAAATAATGCTATAGGCTTTGGCAAAT
AAAAAACAATCAGCTGGCTGTTATTACCTTACAGTGGTTACATATTTTTAAATAACCAAAATAATTGACATAAAATTAA
CAGAAAAACTTAACAAAATGATTTAGTAAATAACTTAAGATCTTGGAGTGCCTCATAGTCATCATTGGAAACATAAGGA
GTATTGTACTTTTCTAGAACCAATAACATAATTCTGGGTGATGGAATCCTTTTGCTATAAGTATCTATGTGAATACACA
AAACATGCAGGGTTTGAACTAAGCATCGAAGAACGAGGATGATTTGAGAAAAAGTTCTGTCTCCTTGGGAATAATACAA
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GCCCAAATACCTCCAGATGGAGTAAGGCTCTCTAAAAAGATATTGACTGGTTTTTCTATCTCTTCTGGATTGCTCTTTC
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GGCTGTTTTTTCCCCTAATTTCTTTGTGTTTTAGTTGATCTACTTGCAAGATGGAATAGTGGAGATAACATTTTCCTAG
TGTTCTTTTGAAGACACGTATAATTGTAGTCCTATTGTCCTGAGACTGAATGTACAGATGAACCCAGCCATGAATGGAG
AAAACCTCAAGAAAAGTGAAAGAAACAAAAACAAGCCAACAGCTCCTTCACTGGGATAAAAACCCTCAGCTAAAAAGAG
ATAGTTACTCTAAGAATTGTACTGTTTTATTAAGTTAGTGACTTAAAATATTAATCTTTTTGAATATAATTTGGCATGG
GGAATCTTTGGGAAGATAAAGATTGTGGTCAATATAACACCTATCTAGCCACCTTTTTTGCGGGTGGTTGGGTCAGTAG
CAGTGGAACAAACTAGTATGTAAATTGAGATTTCTAGGAAAGGTGGAAAATATCTGGGGAACACCATTGGATCATAGCT
TAGTTATTGCAGCAATAAGAAAAATATATTTCTAACTTTAGGGTTAATTTCACTCACGTTTTCCTTCATTTAGATCTGG
TTTTTAATCCCTGATTTAGAGCCGATCTTTTAAATTGTCATTTTACTTTTTTAGAGCTAAATGGTTTGAATTGGACTTA
AATATTCGGAAATAATGTTAAAATGTGAAATTCGTTGCTTTTAGTATAAAATAAATGTATGCATTGAAAAATTCTTTTT
ACATGGTGATTACTTTCATATATTGTGATGCCTTGGTTTTATATAATAATTGCAATGATGATGATGATGATAATGAGAT
TAGCTAACACTTATGTGATACTTCCCTTTGTGACATGTCTGAATTTCTTCTGGTTATGTCATACAGTGGTGGTAATAAT
ACACGTGAAAGGCCAGGATAGTTCTAGCCCTTACATAAGTTTGCTTTATACTTAAGCTAGTCTTTTAGTCCGTTTTTCC
TTTAAACATCATAACCTATTTTGGTTATAGCTACCAGTTGTAACTATTTTCACATAGATTTTTACAGTTAATGGAAAAT
GAACCCTTCTGGAAGTTATCCTTTTTATCAGCAATGAAGATTATACCAGTGCATGCTTTATTACAACCTAGAATGAGTG
TGACTTGAAAAAATTAGAACTTACCAAGTTGCTTGACTCCCTCTTTGTCCAGTGCAGCAGTTAATATCTCATCTCCCAT
TCTCTAGGGCCAGTCAGCCTATGTTCAAATGTCAGTTCTTCCATGTATTAGCTGCAAAACTGACCTGGGGAAAAGTATG
CAGCTTTTTTAGTTCACTATTCTCATACGTAAAATGGGGTAATGGTACCTACTTCATATGATTATTGAGAAGTTTAAAT
GAATTCCTGTTAGAAGCAGTAAGAACAGTGTCTCTCCCATGGCAAGTGCCTTATGTTTTTAAAATAAATATAAATGTCT
GAGGCTCATTGCCATCATATTATCACAGAGCCTGTATCAAGGACATGGAGGCAATACCTGCAGTGGCCAAGCATGAAAA
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TTAGATAATGCTCTGTCTCTAGGAAAAGGTGCTCAGACTTTCAGATCTCTGTGTTCCAGGATTTTCCAGGTTTCTCTCC
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TAGGGTGCCATCACATTATTTGCCAGGCTTGTGTTCTAGCTCTCAGCTAGTCACTTTCTAATTTCCCCCTTAAACACCT
GGACTCCCAGCCCTACCTCAAAGGTTGCCATAGGGAACAAAGAGCTGCTCAGAAAAGCTAAACATCGAGGCCTCCCTCT
GCCTAACTCCCTCCAAATGTCCTTGGTATGGGGCAGCCTGAGAGGGCATATCTTTCTAGAGCCCTGAACAGGAATGGGG
CAGAAATCCTTCATCCCTCGGGCTCTCCTCTATCCACACAAGAGTCTTTAAGGCACACACATCTGACTGCTTTGTTCCT
TCCCTGCTTTTCCTTCTCACACTCCTGGGATGAGAAAGAGAGATGACAGTTTCCTCTACACTCTTCTAGGCCAAATCTT
CATTTCACCATGGAAGAACTCTTTGAGCCAAATCATTTGGATATGTGAAAAGCAATACAGACATTTAAACATTCTTCCT
CAAGACAATATGTCAGTAAGACTTGGCAAATGGCCTGTTTTGAATGCCAGATGCTGAATATTAACTCCTTCTTCCTTTA
TCTGTCTTAAGAATGTTTTATAAATTTGAAAAGCAAGGAAGAGCACAGTGATGTTTTCCAAAATATTAATCCAAAGTAA
GCGCATAATCAATACAAGCTTTATAATGATGATGATGATGATGATGATAAAGTAACCATTAGCACAGGATAATTGCTAT
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TGCTCCTGGAACATGAAATGATTTTTCCTGCTTTGGGGTATGTAATAATTACTACTCTGTCACCTGAAGCCCTGTTTCC
CATATCTTTTCTTAACTGACTTCTCATTTTCAGTCCCTGCCTTAAAAGCTGCCACCTCGATTTTCCTGGATCTTTTCTG
GCCACCCTAACCNAAGTAGCCATCCCCACTTCCAGTTACTCTCCATACCACATCCTCCTTTTTCTTTTCTTTTCTGCAT
AAGTCACTATTTTATGTTTACACATTTTTTTGTCTTTCTACTCCACTAGAATGTAAGCCTCAAGAGGACAGGGGCTGTG
TCCGCTTTATTCCCCACTGGGCTGGCAGAGGACCTGGCACAAAAAAGAGCTCAATACATAGTTATTGAATACATGATAA
GTGACTGAATGCTATCTTATTTCAGATAAAAAGAATCATTATGATTATTAACATTGGTGACATGGATGTGCATGGAGCA
AAAGTACCTTGCATAAGCACAGAAATAAGGATTTTCTATATTATATTTATTATGAACCATAGTAATGGCGAGAATATCT
CTCTCCCTTTATTATTTTGTTCTATAGTGATGGTGGTGGTAGAGTGGGCTAGCACTGCCTCTTAAAAATGATAAGAAGT

Fig. 9.46

CCTTTGAAGGAAGACATCATGCTCGTATTTCTTTCACACTTTTTTGATATTTAGCTGCTCAATACAAACATGTTGGTG
ATCATTGGTGGAGGGAGTGGGGAGTGGGTGAGGGAAAATTACAGGCCCTCCATTTGCATATGATTAAACTGGCAAGACT
TTCCAGGCAAAGCAGTGCTTCAGAAATTATGTGATTGACAGAAGGAAGGTCACATATGTACTTTCTAGAAGAAGAGTAA
TTGTCAAGTTGTGTGCTGAGGAGCCTCAGAGCCTCAGTTGGCAATGGCTTATGTGGAAATTTTCATTTGAACAGAGAGT
TTTAGGGCCACACCCAAGTGGAAACTACTTATTTCAGGATTGGAGCCTCCACAGAGAAAGATCAGAGGTGGGAATGAAA
CAAGAAATAGTTCCAGAGACTGCTGCTGTGTAACAAATTATCTTAGAACTTAGCAGCTGAGAACAACCATTTTTTTAT
GCTCACGCAGGAAGCTACAGGTCAAGAAGTCAGTGAAGGCACAGCGGGAATAGGTTGTCTCTGCTCCAGCTGTGCAGAC
TTGAAGGGCAGGGGAGACCGGATGCCAGGATGGGGTCACATAAAGACACCTTCCCTCACATGTCTGGTGATCAGGATGG
CTCCGTGTGGCTTAGTGTCCTTACAGCCTGGTGGTTGCATGTTGTCAGACACTGGGTGTGGAGCTCAGGACTCCAAGCA
TACGAGTTCCAGTAAAGAAGACGGAAGCTACACTGCTTTTCATGTCCAACCTTGGAAATCACACGGCCTCACTTCCACT
GTCTTCTCTTGGTTGCAATAGTCACAAAACCCACCGAGTTCAAGGGAGATGACATAGACCGCCCTTCTAAATGGGAGGA
GGGTCTAAGAATTTTGCAGCCATGTTTTAAACTAATATTAGGTTGGTGCAAAAGTAATTGCGGTTTTNGCCATTAAAAG
TAATATAAGGGGCCAAGCGTGGTGGCTCACGCCTGTAATCTCAGCACTTTGGGAGGCTGAGGTGGATGGATCACCTGAG
GTCAGGAGTTTATGACCAGCCTGGCCAATGTGGTGAAACCCCATCTCTACTAAAAATACAAAAATTAGCTGGGTGTGGT
GCCGTGCGCCTGCAGTCCCAGCTACTCAGAGGCCGAGGCAGGAGAATCGCTTGAACCTGGGAGGCGAAGGTTGCAGTGA
GCCGAGATCGTGCCACTGCACTCCAGCCTGGGTGACAGAGTGAGACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAAAA
AAGGAAAAAGAAAAAATGTAATACAAATGTAAGGATGAAAGAAGCAAGCAGAGGGGAAGAGAGGGGTCTTGTATTCTGG
AAAGGGAGATAGGCTTGTGACTGCGCGGATCCAGGTTACATTTACTGCACATGTGCCCTGCTTTTTTTGCAGCTAGAGT
GTTTTGATGATCTTCTGAGAGAAACGTCTCCTTCCTCAGCTCCAGTGTGCTCGGGAGCTAAGAGCTGCAGAAAATCATT
TGAAATCTTTGGTGGTCATAATAAAATAGGTAAAGGTACTCTCAGGTACTCAACGACCCTCTTGTCACCAAGCAGCTCC
TCATCAGAACTTCTCCAAACATACACTCTCTCCTTTCCACCTCCAGCTCATCTTGCTTGGCCTCCGCTTTTTCCGTCAC
ATCTCATCTCCTGGCCTTTTTCATTCCTCATCCCTACCTTATTTCCAATTTCAGTCACATTTCGGTGAACACACTGCTC
TTGGTGCTTACAGCAAGGAAGGCTAGTTGTGTTGAATTTATAGTACTTTTTCAACCAGCCATTGGGAAGCACATGGAAC
TCCCCACACTCATTTTTACTGCCATTTTTTTTTCAACATAATTTACAAGAAATAGAAGGAATGTGTATTAGCTAATTGT
GCCACGTGGTCCTATTTTCTCAGCAATACTTATTTTTATTAATGCAGCTGATAGAAAATGAGGCAAATTTTCATCAAAA
AGCTTGCTAATGTAAAACTGAGAGTACCAGGCAGCCTGGAATAAAATAAAGAAACACAATTGTAATATTACTATTTTGG
GAGTTTTACATTAAACTCCTACACAATAATCAAAGGTGGAAGTGTGATCATAAATTTTAGCTGGAATTTAGGAATGTGG
CAGCAACTCTGGGGCACATTTACAGGAAAATCATAGACTCAAATGGAATTTGCTGAGGACTATATATCAATTTGCCATC
AGAGTAGACAGTATTAGAAACCCTGGACTCTTCCCATTAATCATTGTAGATGTGGCATCTCAAACAGAAGAGAGTTATG
GCGGTTATAAATCGTGCACTGAGAGTTGTTTTTTACTTTAGATAGAGAAAACAGTTGAAAGAGTTTGGGATAGCAGATG
TATTGTCTCTGGTTCCTCCTTTTAGTTTTAAAAATTAATTGTGCATTTCAGAATCCTGTACTTTAAATATTTAGACATG
GCAAGTTTTAAAAAGAAGATATGTAGGGCACATACTTCTCATCCACTGCTGACAGGCATCAGGAATGGGGTAAATTTGG
ATAGGAGATGCTTATCCATTCTATGTCACTGCAGATATGAAATTTTGTCTTATTGTTGTTTTGATTTAGCANGAAATAT
CTTTATTATTTTTTTCCAATGATGAGAATGGAAATGTTGTAATTAGTTAAGTCTGAAACTATGATTTAGGAAAGAAAA
AAAAAAGTGCAAGATGATCTATTGCACAGAGAGCCACCCAGAGCCCATCTGTTGGATAGAATAAGGAACCCCTGTGGGT
GTAATTGGGGCAGGAAGAAGGGGCAGGATATGGTGGAAAGTGCTTGGGTTTTGAAGCCCAACTTGTTTTTGAGTCCACG
TTCTATGTTTTTCCTTTGTGTTCTTGAGCAAGATACTTAACTTCAATAATCTATGATCTATACATTGGGAATAATAATC
ACTATCTAGAAATGGTGTTTTAGAGATTAACATATTATAATAACCTTGGTAAAGTATCTGGCTTATACTCAGTAGAAGT
ATCTGCTTTATACCCAGCAAATATTCCTTTTCAAATAGATGTAGGCCACTATGTTATAATTAATAAAGCAATACCATAA
GCATTTGAATGTTTCTGCACAATGACCTATTTGCTGTCTTTTGTTAAATTTTCTTAGTTGGGGGAGTGAAACTCCTGAC
TAGCTTTGGGCTGGATATAGCATAGCGGTGCCCACCTATGTGGAANGGTTTGAAGAGTCCTCGACAGGGCCAGTGACCT
CATTGTCCTTCATAGAGCCAAAAATTGCGCCAGTTACAGATTCAGTCCCCTGAGTTTTGAACAAACTTCCAAAATGCCA
GATCTTCTATTATAATGCAAGTATTCTTGGTAGTTGAGAATGGAGGAGAGTTATGAGAGTGAGGTGAAATAGGTTAAGC
TACAGGTTGCAAACTCATTCCTTGCTCCTCTTGGGAAAACTGGACAGTCAGATGACACATTATTGCCTGGCTGCAATTG
GCTGCAAGGGGCAGCTGCCCAGTTTTGATGGGATGCCCACTCCTGATAGGATACTGATCCCTTTCACCTTACTCTTGGC
ATTCTTTAGACATTTTCACTGTTTTCCTGGCCCTTGCAACACCTGAAAACTTATTTGCCCACAGTTAATTAGAGAAGAG
AACTGACAGATGTCAGCCAAATTTAGTTGAAAGCGGGTAGTCTGTATGTCAGAAGGCTCTATTGTTCTTTCATTATATG
AGGTAGGGCAGGTGGCTGCATCTTTGAACTCTAGTTTCCTCCTCTGTGAGAAGATGGCTTAGAGGTTCCACAATCTCTC
TACTTTTTCTCATTCTCTGGTTCCTGATGGTGATCTGGGTTCTACCTGAAGGGAGCCCAGGATTAGAGAAAGGAAGAAT
ATTACAGGCAAACTGGTCTCTTTCCAACATGGCCCAATCCCTCTTGGCGGAATCTGCTTCAGGGAAGTTAAGCGTTTGT
CTAGAAATTATGATGTCATGTTACGGAGCCCTTATTCCCTCCTCTATAAAACAACTTTCCTGTTGTCAATTCTTCTGTA
ACTATGTTATCTACTATGCTGACCACAGGGTACATGTGGCTTTCCACATTAATGAAAATAAAAGAAAATAAAATATCCT
GTTCCTGGGCCACACAATCTCATTTCCAGGGCTCAATAGCCACATGTGGCTAGTAGCTACTTGGCAGAGGAGACACAGA
AAGAACATTTTCATCATCACAGAAATTCTACTCTTGTAGAGAGTGCTGCTCTAGAAGCTTTAGGCCACTGAAGTTGTAT
TCAGCGACCTGACATCAGAGAGTTTTTGTAGTCACTTGAGCAGAGGTAATGCAATCCCTGGGGAAGACTTCCAGTTTCA
ATTACATTCAGGTTAACAAAGCCCATTGTTCCAACCAAAATAATAGTTGCTCAACATTCCATTCTGATGATTTTTTTA
TCCAAGCAGTCAACATAGTTTCATTAAATACCACCCACTAATTGTGTACTAGTTAAATGAGGAATGAATGTGGCTCTGT
CTCCAGATAAATGAATAGAGAGAGAGACAAAAAAAAAAAAAAAAAAAGAATTGGCTGACTCGGGGTGCTGGGTACACAA
AATAACTTGGTTAGGCTGTAGGATCAGAAAATCTCTCTAGATCTTTTTTCTAGAACTTCCTTTTTCCTAGATCTTCCTT
TCTGAGGAGAATCGCTCAGTTTTAACAAAGTGGCCAGTTTACACTAAAATGCTTGTCATTTATATAAAATATTGGCATT
TGTTGCAATATTGCAAACCAAAGAGTCATTGAGTTCCAAACTAAACAAAAGTTTTATGAAACAGTTTGTCCTGTCCAAC

Fig. 9.47

CTTAAAAAGAGAAGGCATTTACTATATGCCAAGCATTGTGCTGCCTGCTTCACGTGCATTTTCTAATGTGGGTTTCACA
ATACTTTCTTGACAAAGGTCAGCTGTGCACCTACCTGCTGGAGAGACAGCATCAGGAAGGAGGGAAAGCAGAGGTTGTG
GAGTACAGCAGACTGGGCTTAAATTTCAGCTGTGTTACTTACTAAACTTCAAGACTTTGGGCATTTACTTAACTTCTAT
TAGCTCTAGTTTCCCTGTCTGTAAAATGGGGGACATGATACCTGCTTCATGTGATTGTTGTGATGATTAAGTCAGACAA
GGCAAAGGAAGTGCTTGGTGCAAGACCTGGCACACAGAACATGAATACAGGGGAAGAGGTCATCTTTTCTGTCCCTACT
GAATTGTACCTTGTATATATTGGACACTCAGCAAGTATTTGTTGAATAGATAGGTGGATGGAAGGGTGGAAGTCACATC
TACAAAACATTCTTCATCTGCAGAACATTTCCTGNGAGTGTAGGTGGTTGCCTAAGTACAATGATTTGGGGAGGCCAAA
AGTCTCTTATTCAACCTCAAACATCATCCCACTGGCTCTGGCTGCTATTTTGAAATTTAAGTATTCTTCATTCTATTCA
GTTATATGTCCCTGTTAAAAGCAAATATTACTTTAGAGAAGGAACACACTAAGCTATTGTGTGCCATGGTTTTGGTCCA
CCTGCCGAGCCTCCTAAGACAGCACTGTGGAGTGGAAACACCTCTGATCTGGGAGCTGGATATTCTGGCCTCCAGACCT
GGCTGTGCTAGCATCTGGCCTTTCCTGGGCCTTGACCTCAGATTTCCTANTAATTAAATGGAGGATTAGACTAGATCTT
CTGTAAATGGTTTGGTTTCTGGTTTTATAAGTGGGTTACCAGGCAAGTGAGTTTTCATGTTGAGGCATGGGGCAATGCC
TGGGTTGGATGGCTTTGGAAGGTGGCAATGTGGGGATTATAGCCCTGCAAGGACAGGGAGCTTCTGTCCAATGTGGTTA
CAGGGTGCCTGATAATAANAGCATAAGGGACATACCATGAAGGAACAGGGGATCAACAATGACAGTTTTAGGACTGTTT
CACAGCTTTGTTAGATACCAACCTGGTTTATAAACATCCCTTAGGAGTCTTCCTGGATATTAAGCATCAACATAAGATC
ACCTGGAATGAAGCCAGTTGACTGCTCCAAACGTGATCTTCAAAACTGGGTGCCCTTATGCAGCAAGGCTTGTGTGTAT
TGTGGAAAACTGCTCCAGGACATTCTGAAGCGTGACTGTCCACTCGGTGGTGCAACCACGGACTGCCAGAAGCTACTGG
CCTGGAGCAACTGGCCTAGCCCATAGAAAGCAGGAATGAAGCAGCTCTTCGTGGCTGTAGGTGTCCCACGGAACAAGGG
TAGAGCCAATTACTGAACACCTCCCACATGCCAGGCACCATAGTGGGCATTTCACACACATTGTCTCATGTAAACTCAC
AGCTGTTCCATGTAGTAGACATTACTGCCTTCACAACACAAATGGGGAACTGCAACTCAGAGAGGAAAGAAGTAGAGGT
GAGATTTGAGAAGATTTTGGATGCCAAAATTCGCATGTCTTCCCATGTATGTCGCACAACCTCCAGGATGTTCTGCAG
ATATCACTTGCTGTTATAGTTCAATGTTCTCTACCCATGGGCATTTAGGGTGGAATTATTGTTCTCACATTATTGCTAT
TTCAGGCATTGCTGGAACAAAGAAACAATCACCACCAGTGGCCCCATCTACTCTGAGAGAGAGCGTTTGAAGTCATCAG
TCGTATTTTCCAGCTGTCAGGGTTCCAATTTAAGTTTTATGTTGGATCTTTTTCTCTTTACTCTTGGTTGATTGGAGTT
ATAATCTGTGTTTTCNTTCCCATTTTTGGGTATTCACATTTAGATTTTATTGAGATTCATTTCATAGTGCTTTAAAAGG
TTAACAAGAAGCCTGAAACTCTCTGGGTTTCTTATTAAGATGCAGCAGGGAAGAAGACAGAGTGTTTCAGTTTATTGGG
CTAGACATATCTGTTGATTGACGCAGATGCTGCAAACATGTTCTGGGAACCATTTCAATGTTCTGTAATAAGTAGCACA
TTAATCAGGACTGGGCAAACTGGAGGGGTCTCAGCAGGGTTGGAGTTTCCTGGGAAGTGCCTATTAAGATGAAGAATTA
GCCAGTGCTCACGTTTAACANGTAGACTCCTGAGATGCGGCCTGGAGGGAGATGCCACAGAGTGCTGATCAACATTGGT
GCGGATCACTGACGTGTGATCACTTTCACCTGTACATCATTATCAGTTCAAAGCCTCCCCCTGCCCCGTGGGCTTGCCG
TGAGAGGGAGGCTCCATCCTCTTTTTAACATAAGGGCAGGAGGGTNTGCACACTCCAGAGATGTGTGTCATTTACTCT
TTGCAGCTTCAGCAATTGAGTAGACTGAAGAAAGATGTTCGTGAAAGGTGGACTTTTCTTTTTATCATCATTTGCCCTT
TTTCTAGATTTTTCATTGTGAAGTGTGTTATATATTCAAGACTTTATATCATGTCATCAAAAGCCTAACCATAAAATAA
GTCTTGAGTATGCCCACTGTACTGTATGGAGCATGAAGCCGGCTTTTTGTGCAGTCTCCTTGTTGGAACCACTCCTTGA
AATTTGGGCTTATCATGTCCTGACTTTTCTGGACAGTTTTACCACATAAGATAGTTTGCTAAACATCTTCCCCGTATTT
AAAATGTGGCTTTTGTGTAATAAAGCCCTGTGGACTCCATAGCAGTACCAAGTTTACAAAACTACCCCAGTACCACGGT
TTTGTAAACAGTACCCCTGTTTGCAAAAACTGGCTCTGTTTTAAAATAGCTTAGATGGCCTTTATCCCAAGTGCTTGTG
TTTTGATTATTCTCTGATGCAGAATTAAATGAAGAAATTTGTGCACGAAGCAAACTTCACCTCTGTATCCCCCAATACC
ACATGATCTCGGCTCACTGCAACCTGTGCCTCCCAGGTTCAAACAATTCTCCTGTCTCAGCCTCCCAAGTAGCTAGGAT
TACAGGTGCCTGCCACCACGCCCGGCTAATTTTTGTATTTTTGTTAGAGATGGAGTTTCACCATGTTGGTCAGCCTGGT
CTTGAACTCCTGACCTCAAGTGATCCACCCAACTCGGCCTCCCAAAGTGCTAGGATAACAGGCGTGAGCCATCGCACCC
AGCCCCTCAGTTTTAATTCTATAAATTAATGGATTTTATAGTAGGATGTTAGGACAAGAAATTTATATGTCATTACATA
TACTTGGGGATTGATAAGAATTTATATTTCTTTTTTTTTTTTTTTTTTTTTTTGAGATGGAGTCTTGCTCTGTTACCCA
GGCTGGAGTGCAGTGGTGAGATCTTGGCTCACTGCAAGCTCTGCCTTCCGGGTTCACGCCATTCTCCTGCCTCAGCCTC
CCGAGTAGCTGGGACTACAGGCGCCTGCCACCACGCCTGGCTAATTTTTTGTATTTTTAGTAGAGACAGGGTTTCACCA
TGTTAGCCAGGATGGTCTCGATCTCCTGACCTCATGATCCGTCCGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGA
GAATTTATATTTCAATATAGCAGAAAACTAATGAAAACTTTCGAACCCCAGTCCCATCCACTTCTGTTTTACCATTCCA
CATTCTTGTGTAGTGAGTATGGTTCTGAGGCAGTGGTCACTTTGTGANGCAGTCATGAAATAAATAGGAGAGAATCTGG
CCATACTTGTGTTTTTCCAGATCCAAAGGTAGGATAAGCCTCAGATGCTGATGTGAATTTAGTGAGGGGTCCTGATATG
GCNTGATGCCCCTTGCTGTTACTCTGGTTGAGCACAAATGTGTCCTTTTATATCATATATCCACTTGAGATCTTCAAGGC
AAGCAATTGAAACAGACTTTGGCTGGCTTAGGCATAAAAGTAACTTCTTGAGAGATACCAGGTTATCTGGTGGACTCAC
TGTAAAGTTGTAGGAACCAGACTTAGAATATGGGTGGGGAAAAAGGGAAGCCAGAGCCAAATTAAAAGTCACACCAGAG
AGCCAGCTTGGGGAGCCATCACTGCTGCTCCTGCTGAACACTGGGCATGGGGCCGGCACGGCCACTGCTGGTGTTGGCC
TTGGATACGGTTGCTTGGTGCTGCTGGACCTACTGGCCTGGCAACTGGCTGCTGCCACCACAGTTGCCAGGATGAAGTT
TCTCTGTTCTCTGAGCCACTGGCCCCGGATTTGAAGCCCCAGGATGGATGTATATCATTGTCTATGACCATGATCTGTG
CCATGACTGCCAGAGAGTCTGAAAAAGAAAGAATCTGGCTATCTTGACTGCTGTAATGGAAGGGGCTTTGTTTCCCACT
AAGATTCACATGGCAGGAAATTCATCAAATATAGGAAGGGTTTCAGATACCAGAAGGCCACAGTCTGACAATACATAAT
CAACTCATTTTATCTAAAGGCATTCTTTTGAACCTTTAATTTTCCTTCTTGCTGACATCTTTATTCTTTTAAGCCCCTT
ATTAATAGTCTGTATTTCAAGTAGGAGAAGAAAATATAAAGAGATATCCTTCAGTTCCTTTTCTTTATAGCTTTCTTGA
AGTTTCTATAAGCAATACTAAGAGGTAATATAGCCTCTGTCACACCCCCACCCCAAGAAATTGGATTGGAGAAGTGAAC
ACACCTTCTGAGAGTGCAACTATAAAATAGGCCTAGAATGGATCAGATGAAAGGAAATAAAAAGCAATTATTTAAGTGG

Fig. 9.48

GGCTTAGATGTTGCTTAAACTTGGCTTTTCCTCCTCTATAAATAATCAAATTATAGATCTCCAGGGACCTAAAATGTTA
ATTTTGGGATGTATGCCTCATTGCAATTCAAAGATAGGTGGGTGCTTAACATGAGGAAGTAGAGTTTAGTGATTACAAA
CAGGGTGTTGGGGTTGGACAGACCTGGGTGCAAGTCCTTGTTCAGCTGTGTGACTTGGGGCACATTTCTTCACCCTCTG
AGTCTGTTTCTCATTTGAAAAAGGGCAGTGGTAATCTTTATCTCACAGAGTTGGTATGGGAATTGAATAAATTCATATA
TGTAAATCCCATATTAAGTATTTAGTAAATAGCTATTCTCATTCTAATTCCTGTTATAGGAGAATAGAGGAGAAGTTGG
TTCTCTTAAAGTAAAAATGGGTTGCTTTTGGAGGAAATGTCAAGCAGAGGTCAGTTGACAATGCAATGGGTGTTGTAGA
GGAAGATCTAGCACTGGGGAGTAAGTGTGGTGGACTGAGGGATGTCCCAGGTTCCCTTCGATAGCTAACTCTATGGTAC
AGTAACTCTCTTGAGAACTCAGACAAGGATTAGTCCTCTCAGCTGGGCTACTCCTGATGTTGATGGTGAAACACCAGCC
ACTCAGGCAGTGTCCATCAATGTCAACCCTAATCTGGAAATGAACTGACCAGGCCAAGGTAGAAGCCTGTTGGTCTGTC
CAACTAGTAACAGATCCGTAAAAGTGACAGCCACTTTTACCACCATCATTATAGCTCTGACCACTTTCCCTGACTTGAT
TTGGCCAATGTGTTGTGTGAGTGGTGGATGGAAGAAGCTAATACAGCTATGGCCTTCTTCAATAATGGTGAGGTACCAC
TATCATTTGCAAATCAGTTCAAAAATAGGAGGTCTTCCCAGCTGGGCACTAAGAGCTAATTCTCTTGGGCAATTTTTTT
TATTGCATTCAACCATAGANGATTAAAAAACAAAAAAGAATGGCATTTTCTCCTCCCAAAGCAAAACCTCTTGGATTCA
TGGTCTATCCTAATTATATCTTCTGGGGTAATCCTGAGAAATCTTGTCCATTCCAGTAGAGCCTGTGCTGTGAATCANC
TGTAAGAGTGCTCACCTAGTTTTGCTACAGTGCAAGAATTTCAAGGTCTAAACTCTATGAACAAATTGATTAGGGTAAG
TTATTGCCTATAATGTGATTAAATTATACTATAAGGAATTATTTTATCTGATGGTTTTCCAACATGAGAGCTCAGGCAG
AATAGCACAAAGGATGAGATTATAGATCTACTCATGATTTTCAAGTACATAATACACTGTTCTTAACTATAGTCAACAC
CTTGTGTAATAGATCCCTTGAACTTATTTCTCCTAGCTAACTGAAGTTTCCTATCCTTTGACCAATATCTCTCCCACTT
ACAACTCTCTGTCCCTAGCCCCCAGTAAACACCATTCTACTCTCTGCTTTTGTAGGTTTGACTTTTAAAATTTTCACAT
ATGAGTGAAACCATGTGGTATAGTGTTTGTTTTTCTGTGCTTGGCTTATTTCACTTAATATGATGTCCTCCAGATTCAG
TAATGTTGTTGCACATGACATGATTTCCTTCTTTTAAGGCTGAACAGGATTCCATTGTGTATATATACCATATTTTATT
TACCATTCATCCATTGATGGAAACTTAGGTTGATTCCATATCTTGGCTATTGTGAATAATGCTGCAATGAACATGGGAG
TGTAGCTATCTCTTCAAAATGATTTCATTTCCTTTAGAAATCTACCTAGTCATGGGATTCCTGGATCATATGGTAGTTC
TATTTTTAATTTTTTGAGAAACCTCCATATTGCTTCCCATAATGGCTGCACTAATTTACATTCCCATGAACAGTGTGCA
GATGTTCCCTTTTTTCCATATTCTTGCTAACACTTGCTAACTTTTGTCTTTTGATGATAGCTGTTTTAACAGATATGAG
GTGATAGCTCATTGCAGTTTTAATTTGTAAGGGAAATGCACATTTAAAAATACTGTGAGTGCTAGTAGTAAATGTGGGA
TCCTAAAAATTTGCATTGGACCACGTGAAGAATTTCTTTTGTGAGGCCGGAAAATGGGCTAAGAGTCAGAATGACCTAG
TGTTCGTCTTTGTTTCCATACAATTCCCAACCTACCTTGAGGTCCACGTCTGAATTTGGCTGTTGAAGGCTTTAATTTT
CAAGGAAAGGAAAGGTCTGCCTGGGATAAGTCGGCCAGCAAGTCAGCAGAAGCAAGCCTAAGACTAAGGAAACACAGAT
CTACCTGTTGTCTAAGGCCAAGCTGGCATAGATACCTAACTCTGGGTCTTCTCTGTCTGGGGGCAAAATCTCCAGCCTT
GAATAGGAGTCAGACCTGTTATGGTGGCTTTCACCTGAAGTCCCATCTACTCACGAGGCTGAGGCAGGCTCCCTTGAGG
CAGGATCCCTTGAGCCCAGGAGTTTGAGGCTGCAGTGAACTATGATCACACTACTGCACTCTAGCCTCGACAACAGAGC
AAGACCCTGTCTCTAAAAAGAGAAAAGAATAAAAAAAAGGAGTTAAAAGTTAATATAGAACCAGAGAGAGAGAGGGAACAG
GTCTTCTCAGATGGGGTAATCCCTGGTTTGACTTTCCTTCTAGCCCCATGAGAAGAAGACCCGTAAGAAAATAAGGGAA
GAAGCCAAAGAAATATGTGGCAGGGTCTTTCCCAGGTGGCAGCAGCCCAACCCAGTTCACCTTCCTGACTTCATAAAGG
AAGACACAGGAGGCTTTTCTTATTTTTACTCCTCTCATTAGACTCCACCATCTGCAAAATGTTGTCTAATAATAAACTC
TCAGGATCATCTATTTTAACATATCTGCTCCTTTGTGGGAAGAGTGAGTGTGAAAATTTGGAACATGCGCAGTGGATA
AAGCTGTTATTTTATGCAAAACAGAAAAGAGCAGTGCCCCCTTTGGGTGGATGTAGCCCTGTACCAGTGCACACAGCTT
GGTATTCTCAAAGAAGCCCACAAAACAACCAAGGAGGCTGTTCCAGCTGGGCACTAGTAGCTGATTCTCTTGGTAACCG
TGGGCTGGGTTTTAGCTNTCACATGCCTGCTTGAGCGGAGTACCTTTGTGTGGTAAACAACCTGGACCACTCTACATGG
TCCCCTGGTGGTGGTAATGGGCAGGCTTAAGCGGTGTGATATTGGTTAGGGGGCTCAAACAACTCATGGAATGGGCACC
TAAGCAAGGTAGAGAGATGCAGAGCGGGGAGGGAGGAGTTCTGAAGGGGAGTTTGGCTTGTTTGCTTTTTTTTTTTTTC
TTCTATCTTGGCACCCTTTATTAACAGAACACAGTGTAGATTATGCATTGTATTTTGAAAAAGAAAGAGAAATAAAAGG
CGTAATCTTTGCTTTTGAGATGTTTTCAGTCTAACTCAGCAATTCCTTTCCCTCATCCTTTCTGCCTCACTACTTATTA
CATTTACTTCTAGTTCTTCCTCTTTAAATTGAAAAAGCAGAGGCAAAACCAGACACTGTGATAATGGAATTTTATGTTG
TGGTCTTTGATTACACTTCCCTTCCAAAGCTTCAATATTTCACATTGTTAATAATAATGTTCTTTGTAGGAAAAAATCC
TTAATTTGAAAATGTTGCAGATGGCCTTTTATCAGGAGCTATGGACTGTCAAAATAAATAGATATAATTATGAACCATT
GTTGTTGAATGGGCCATCTTAAATAATAGCAGTCAAGTTTCCAGAAATTAAAAAAAAAAACCTTACATTTTAAAAAGAC
CTCAGAATAATTAGTGGTCTCTGGTTGATTGGTTTTCAACAAGTTATTCAGCAGATGGAGGCTGTCAGATTTCTGCTGG
TACGATTATTTTTGTAACTCAGTGGTGGAGGGGGGTGGTTTATGCAACTCAGCATCACCTCTTTGTTGAATTGGATTTG
GTTTAAGAGAATCCCACCGCACCTGTACATTAAGATGGAGCATGAGGAAGGTCTTGGGACCGAGCCATTTGAAGAAAAT
CTAGGCTCNGGTGGGTCACTTTAGGAGTATTAGTATAGCCTTAGACATTAGCTCTTGGAACTACCCTGAAGGCGAAAAT
GTGAGACAGCTAATATTTCTCTGCAAGAATTCCTTGGGTTGCTGAGTTTTGGTTCTTGCCATCAAGAAAATGTTTGTAC
CGGAGCAAGATGTGGAAAACCCCAGATGAGAGGATATTAATGTAGATTCATGAGCTCTGCCAAAGTAATGTCATTACTG
CTGCTCCATCCCTGAAGAAAGATCTTAAACATATGTAAATAGACAAGACAAGTTATAAATTGTAATTTAGTATCTGGTA
ACTGAAAGTCTTTACTTCATTTGTACTGAGTGATTACCTGAATTTACTAAGGAAAATTTTGGAGGTCACAGATTTGAGT
TGAAGTCAATAAAATAGGATAAAAGTCTAGATGATGAAACTTAGCTTTTGTTGATTAGAGTTCTGTTTAGCTCTTAAAA
CTGCAGTAAATAAAATGTTATATTAGTGGAAAATACAAATGGATTCAGAAAATATAGACAAATCGATAGGCAATTGAAA
TGTATACATTTTATTTCAACATATCAAACCTCGAGTTCAAAGTTCTTCATAAAAACACAATTCCTAAATTAACTTTAC
AATAACTGTGAGCATTCTTATCCCCATTTCAGTGCTACAAACCCAAGTTATGGGGAGAAAACTTTAAAAGGAGGCAAGA
GCTGCCACTATAATTTAAAATATATTGTTCTCCACTCTTTTTACATATTCTTGAAAGCAGTTCATTAACGGTGACCTTG

Fig. 9.49

TGTAGGAAAAATTAGCATTTGTGCCAAAAAATTCTTTGTATGTGTTAGTTTGTGTGCATATTTTGGAGTCTTCATGTTA
AAAGTATAGGACAGACCTACTTGACAAAGGTGAATTTTGTCGAAATTTTGGGGAGAATATAGATTTGAATTCATGTAAA
TAAGATTGAATAAAAATCCAGATGACTGAAACATATTTCATCTTTTGCTAATTAGAGCTTTATTGAGCACTTAAGCTGC
AAAAAATAAGAGGTTATATTAGTAGAAAATACACATGGATTTAGAAAATTTAGGTAAATCTGTAGATAATTGGAATATA
ACTCAGGAAAACATTCAATGAAACCTCTTTTTCAACACATAGATTAGTACCCTAAGAGAGTTAAATTAGTGTTTTACTG
TGAAACTATTTTCTTCCACACCAGAATCTATTGTATGTTGGCAAAGAAAAATGGACTAGCCATTCATTATCACCAAGAG
TTTATTACTTACTCTGGCCACCTCAGTGTTCAGTGGGTACCTAAAGTGAAAAGAGTTTTAAGTGCTACCTTTGCAGTAT
TAAGTTTGAGTGAATCCAGGGATATTTGCTGTGAGTGTGGCAAAATGATTATTGTGGAATTGGTTGTTGAATTTGAATT
TTTTGTTGCTGGCAAAATTCACATTGCCAAGTCCTCCTTTTAAATTGAAGAGTATTTTAAGTGAAATGCAATACAAACA
TATCTTATTCCTTGAACTTCTTGATTAAATTGGTAGTGTTTTTTATTTGTAGTAGGCTACTTATAGAGTTCTTTTTCAT
AAAACTTGAAGGTTCTTCTTCATAAATCTTGCAGCTTCAAGGGGAAAAAAAGGAAAAAAGAAACTTATTTCCTCTTAGA
CCCTTACTGTCACACCTCAAGTATTGGACACAATGTGCGATGCTTAAAGACTCTCTTGGCTTAGAAAAGCCTTTCTCCT
CTCTTGGCAAATCAGGCAATGTGAAATCAGTAAGGGCCCAGTTCTCACTGTTTTCCTATGAAGTTGTTCCGATGTGTGA
CACATCCACCTTATGGAGGTTTAAGTTGGTTGTGTCTTGAGGCTCACAAAAGCAGGTTGTGGAATTGGTATAAGCATTT
GATTTATTTGAACATATCTGGTGGTGTGTCATTGACTGACCCCTCTGTTATAAGCTTTCCTTCAAAAAAAGTCCATCAG
AGACTTGAAGTTTCACAATCAAAGCTTTGTTTACTGGGCATATTTTTCAGCCTCAAGGAAATCTTCCCTGGCTCCCTGT
AGAAGCAATAGTTACACCTTCCTTAGGGGAAGAACCCGTTTAAATGTGTTGCACATCTTCACCTCTTTTACTTGAATAA
GAAGTTTACAATCTTCCCTGTGGTATCCTTCTTAGGGGAACTCTAGGAAGAAATGTTTGATCATGAGAGTGGTAACTGG
AAGCATGAACTGGAGTACGGTGTTCCCCATTTAAAGAAATTTTGCTTAAATTTTTTTTTAAATGGCTTTCCAGAGGTCA
GGCAAAGGCCAGTTTCCCCTTGATATTGGGAATTTCAGGGTGGGATTAACAAAAGGCTAGAAAATGAAGATGGAAAGGG
ATTTATAGCTACATAGCAGCAGCATGGACAATTTCCTAATGTGCATCTCTAATTAAATATTGGTGTATTAGCTTATTAA
TTACTTCAACAAATATTCATTGAGTATCTCTGCCAGGCAAGAATCTGGGCACCAGAGTTACAAAAGTGAATGAGGCACA
TTTTTCTTCCTGAGGGAGCCTAGAAGGAAATATACAATTAACTACAGTCATTGTTTCTCACACTACCAAATGAAAGAGG
TGAGGCTTACCTGTTTCTCAATGTCGTTTTTCTGAGGACAAATAAATGAAGAAACTTCAACTAGAAAAAACAAAAATCA
TATTCACAGTTGGATTGTCTGTACAATATTGTCATCAGTAAATCATGTAATGGTATTATAGGACTTGGACTGAGTGTGA
CATTGCCAATTTCAGTTTGTAATTTGTTCAAACTTGCAAGTGATAATGTGGTACTTTATTTTGAGGAGCAAAACAATAA
AAACCATCAGTACAAACTCAGGGTATCTTTGGTCCTAGAGATCTCTATTCACAATGATTCCTTACACTGTGTGAAGTAT
GAAAGTTCTATAAAAAGATTTCTCCACAATTCATTTTATAATAGTCCTGTCAGTAGGTTTTATTAACTCTACTTTTCTG
TTGAAAATATGGAGTCTCAGTAATTGTGATTGAGTTAGTCATCCCAGGTTATAAAACCAACAGTTTCAGAAGGGTCTTG
AATGAAATATCTTCTGCCTTTCAATCCAGGGAAGTTTGTACTATACCTCAACAAGGACTAAAGGTAAGGGCTAAACATG
GAACATCACAGCTATCAAATTGATGAGAGAGGCCTTATCACTTCTTAGGTTGCTCAAGAGGATGATGTGAGCAGAATAA
TGGCCCCCAAAGAGGTTTATGTTCTCATCTCTGGAATCTTTGAATACGTTATAGGACAAAGGAGAGTTAAGATTGTGGA
TGGAATTAAGATTACTAATCAGATGATCTTATAATAGGGAGATTATCCTGGATTATCCTGGTGGGCCCAATTCAATATT
TTAAAAGGTAGGCAGGAAAAGAGAGGGAATTGTGACTAAGGAAACTAAGGGGCAGTAGTCAGAGGGATATAACATTGCG
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TTTCCCCTAGAGCATCCAGAAAGAAACTCAGCCCTATGAACCTCTTGGTTTTAGCCCACTGAGACTCATAGGACTTCTG
TCCTATGGAACTGTGGCATGATAAACTTTTGTTGTTTTATGCCACTAATGGTAATTTGTTAAAGTAGCAGTAGGAAACT
AATCTGCGGGGTGGCTGTTAGAGCCTGATTTATAGCTATCTACCTTCAGAGCAGACAGTGTGACTGGGAGCCCCCTGTG
ATCACCATGTGGGGATGTTATAGGTTAGATCAATCATTTATTCAATTATTTATTAATAAACATTTATTGCACATCTACT
TGGTACAAGTCACTGTTCTAGGCCAAACAGTAAACAAGACATAAAAAATCTTGCCTTCATGAAGCTATCATTGTAGAAG
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GATAGGAAGCAGTGTGTGTGTGTGAATATGCATGTGTATATGTGTGCATGTTTATATTAGGTTTGTAAATTTTAGATGG
GGCTTCTAGGGCAGGTTCACTGAGAAGGTGATATGTAAATAAAGACCCGAGGACTTCTTTTAGGAAGGAAGAAACAGCC
AGTGACTTTCTATCCCAAGCAAAGGAAATGCAAAGGCTCTGAGGGCAGAGGGTTCCTGGCACGGGAGGGATGGGAGATG
GTGAATAGGTGAGAATGTAGGTAAAACTTCCAAGGTGCCAGGTTGATTTTTTTAATAGTAGCTTATATTCCCCCTCAGG
CCAAGCCTTGGAGATTTTCTCCTCAGCTGGTGGTTCTTGTTTTTTTTTTTTTTTTAAATTATCATTTCTACTGCAGAGA
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AATTTTATGGATCAGTCATTTTAATTAATAAGGAGAATGGGGGAAAGTGATGCAAACAATGTAAGTCCTGGTTGGCATT
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GCGCTAAACTCAACCAGAGGTCACAGAGTACTGTTGGCAAAGGTTGGCCTCTTTTTCTTGCTGCACGTGGCTCGTATTT
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GTTGGACACCCAGAGCTAAGAAGTAGAGAGATGTAGGTAGAAGGGCCAGCCAATTGGCAGCAGTAGGCTGCAACAGCCA
CACACTTGCCCCGGGAAGTGGGAAATAGGAGGGATGCTAGAGCTTGGTTTCTAACATGGCAAAGATCTATGAGAGCGAG
AGAGAATAGTAATGGAGTAAACCAAAGGAAGAAATAAGATGCCTCCAGAGGGATATGGCAGCTTTAAAACATGGCCTCA
AAATCCTTTGACACTCCTTCCATCAAGAAATGGGGTCTATGTCTCTTCCCCTTGTATCCTCTTGTGACTGCTTGACCAA
TGGGATGGGGTAGAGGTGTCAGTTTCTGGTGCAGACCTTCAGAAATGGGTCGCTTCTACTTTGTGTATCCTGAGAGGCT
TGCTCCCAGAACCCAGCCAACATGTTGTGAAGAAGCCCATAGAAAGGCCCGTATGGAGAGGAAACTGCAGTCAGCCATG
TGTGAGAGTCATCTTTGAAGCAGATCCTTCAGCCTGTCAAGCAATTCCAGCCGACATTACATGGCACAGAGATGAGCTG
TGCCTTCTGAGCCTTCCCCAAATTGTAGATTTGTGAGAAAATGAAATCACTGTTGTTACTTTCAGCTACTAAGTTTTAA
GGTAGCTTGTTATATGTGAACGATTGTAACAGGGTGCATTTTAGGTGACTAGGAAAGAGAAATACCAGGTTTCATGCAA

Fig. 9.50

TATTGAGGTTGCTTTGTTATTCAAGTATATAAAATATAAATCATATGATTAAAATTTTTAATCATTTAGAGTTTTTTT
ATTCTCTCCTTCGAAAAATGCACATATGCCAACCTTTTGAATACAGTTTCAAGAGTCTGAATACCTTCTACATCCATCC
ATGGGCATAGACTCCAAGCTGAGAACCTCTGTGGTCAGAATTTCTTCTCACTACTGTGTTATAAAGTGCAATTTGGTGT
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GCTCCCATAATCCTTGTTATAATGTTGGGGCACTTTAGGCCTCAGGAAACGGAATCTTTCCCTCTAACCTTCTCCTGTC
CTCCTTTCACTTGCCCAAGGCAGGACTCTAATCTGATTGTCGGTCAAAATACCCTCATTCCAGATCCTGTCCTATGCAG
GCACATGGATGAAGCTGGAAGCCATCATCCTCAGCAAACTAACACAGAAACAGAAAACCAAGCACCGCATGTTCTCACT
CACAAGTGGGAGTTGAACACTGAGAACACATGGACACAGAGAGGGGAACAATATACACCAGTGAGGGGAGGGAACTTAG
AGGATGGGTCAATAGGTGCAGCAAACCACCATGGCACATGTATACCTGTGTAACAAACCTGCACGTTCTGCATATTTAT
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TACCTAAGAGGAATGAATGCTACACAGAGAGGCCAAGAAAAGTCTGAGTAGATAGGCATTGATGGGTTTAGATCATGCA
CTTTTTGTCCAATCACATTTCTACAGGGTTGTCAATCATGTTTATGTAATGAAGCCTCCATAACAACCCAAGAGGATTG
GGTTTGGGGAGCTTCCAGATAGCTGAACACGTGAAGGTTCTTGGAGGGTGGTGCATCTACGGAGGACGCAGAAGCTCAT
GCATCTTCCCTCATACCTCACCCTACACATCTGTATCCTTTGTAATATACTTTATAATAAACTGGTAAGGGTAAAAGTG
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CGCAAAGATTGGTATCAGTTTACACCAAAACAGAACACACTGCTGGTGAGCACAGGGAGTTGGAAACAATATACACAAA
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CAAGGAATTGAGGGAAGGCTCTTGAGAGAGAAAGAGATCTGAGAGCTGTATCTTCCTAAAAAGTTGGTGTATTCCAGGT
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TACAAGTCTCAGAGACTACAAGTTTGCAAGACTGTAATGAGGCAGGCCCAAAGCACCAGAAGTTAACATCCTTGAGAGC
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TCCCATACTTGCCATTCTTCCATACCCTCCTACATTTTGCTTCCTGGAATCCCTTCTCGAAAAACTACTCATGCTTAAA
TTCTTAGCTCAGGCTCTACTTCTGGTGGAATCCAATCTGGGACAGGTTTTTGGCTTGTGGAGGAACAGTGGCAATGAAG
GCGGAGTCTGGATGATTTTCATGAGAATGCAAGAGAGAGTGGAAGACTCTGGTTCAATTTAGAAAGCACAGTTCGTTGC
AATTATGGCCAAGCTGTATGTATTCTGGGAGACAGGGAAGGACTTTTCGATGATTCAAGGTTTAGGTTTGTTGACTGGT
GGGATCCATTAAGCAAAATAAGGAATACAAGAAGAGGAATAGGATTTTTGGTGAAATGTGTGGGATTTGGATTTGATTA
TGCTGAATTTGAGGTATTTCCATGGACAGTGTAGGCATTGGGGAAGAGGACTAGTTGCGACACCCCAGTTTGGAAGCTG
AGCATCAGCCCCTGAGTAGTAGTAGAAGAAGTGGGTGTGGCTGTGGTCACTCAAGCTGAGTGTGGGGATGGGGAGTAGG
AAGAACCCAACAGAAACAAACTTCTGGGAGTACCAACCTTTAACAATCAAATAGATGAGGAGGAACTTGCTACAGTGAA

Fig. 9.51

GGAGTGATCTGTAGCACCAGGCAAGGGCCAGGGGAGTGATGTCGTAGAAGCCAAGAAAGGAAATCATGTCAGGAGGAGA
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TCAAGTTGGTCCCTATTTCTGTTTGAATTATCACAGGTTTCAATTTTATGTTGCCAAAAGATAAGATTTAATACCATAG
CTGATGCCCCTTTGAATTTTGAATAACAATTCTATTTTCTTTATACTATTTAGTTATTTGTGGTTAAGAATCTGGTCTG
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CGGTGAAATGGGGGAAGTCAGCCAGAAACTCTGATTTTGACAGCAACATTATTTAAAGGAGTTTCTGAAATGATCAAAC
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TTGTACATTTTCTATTGCCCATTGGATGTTCCTACCTGGATATGGAAGTCAAATTGAATGTCAGCTACCAAATTTACCT
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CATATGCAAAGTGTTGTCAACCAGGGAAACACTTGAGCTTTGATGTTTTTAATGGAGGCCAGCCACATAGTCATGCAGC
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GCATAAACTATCTGATCAAACTGGTACCACATGCTCCAAGGCCTGAGGCATACAACACTCTTACCAGGCAGAATATACC
TGTGGCTCAAGGCTTACTCTCAGGAGCTGGCCTAAGTTCAGTCTTGAAGAGAGGTTTTTCTTGGGCATGTGCAGGGCTT
GAGCCACCTAGATTTGCTGAGTTAATCTTACTACACATGCACGAAAAATCACCAAGCTTTGTTGGTTACTGGGAAAATT
CAGAGCACATACTGTGGTGTTAGATATGTGTTTGAGTTCTGCCTTTGAGACGATTAAATGAGATGTGATTAACATACTG
CTGGACACATAAATACTAAGTGATGTCGATTTCTCGTTGTTGTGATTTTTATTATCTCTGCCCTTTTCTATCCAATATC
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CCTTGGAATGTTTGAGCAGTAATATAATCTATCAACTTCCTAGCTAGCCTCTGTGTTAAATGATCATTAGAGTATCTAA
AGAGGCTGGAAGCAGAGAGGCCAGCTAGGATACACTAATCTATCCTGCTGACCATCACTAAGTTCACATCCTCAAAGTT
CAGTGTTGACAAACCATTTCTGTTCTCTATAACTGCCGTATCATGGTCTTCTCTTGATTAGTCACGTAAGCTCATTTTT
AAGCTCAATCACCCATGACTTTCCTATACGCAAGTGAAACCATAAAATTAACCAGCATCGGGCACATTTTATCTTAGCA
CCTTTTATACCTTTGCTCATACTTTCACTGAGATTGAGGGCTCTTTTTTGAAGATAGTTACCATTTCATTCACCTTTGA
ATTCTCCAGAGCCCAGGTACCTTACCTGTGGTCATGGCTGAAACATGTAATCAATTAATGTAAGAAGAAGTATTGTCCC
AGTGTTTCAAAGAAATCCAGGTGCTATTCAATGACAGTGAGACGTCAGGCCAAGGGGGTGAAGGGAGGCTGAAACCCAG

Fig. 9.52

TCCATGCTTTGCTCACAAGCCAAGTCCTGAGATGGGATGAGGAGAAAGAGGTGTCTTTTTCTAATCTCATTAAAGCACT
GAGTAGTGTGGTGGGGGCTTTTCTTCTGGGGTTTTGTTTACTAAAAGACTTCCTACAAAGAACCTGTAGGCCCCACAAA
GATCATATGCATGGACATTATTGTAGGGCAGCAGGAGAAAAAATGCTATTTTGGTTCTGCTTTCTAGAAATTTTCAAGTG
CTGGGCTACCAAGTCAACTAGCTCCTCTGCATCCTTTAGATGTCTGTGGCTGAGGACAGCTTCATGAGATTGGGTCCTC
AGAGCTGCTTTGCACTTCCCAAGAATAGACCTGTGGACCATGTCCTTTTTGTCCACCCAAGTTTATTTATTTTTGGGA
CAGCACCTCTTTTACCAGAGAAAGTAACTCTTGCGGCTAAAAATATACCGGAAATAAGAATGAAGAAAAGTAACTGGAT
CAGCTATACTTGGTAAAAATACCTAAAGCTCTGTTTCATGAAAGTGTTTCTAAAAATAAAAACTAGTCCCTGGCAATGC
AGCAAATAGCCAAAACGACTTCTTTGGTTGATTGGTTTAATGTTTTTTTTTTTTTTCTTTTCCTGGTTACAGTTTTAA
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CTCCCAAAGTGCTGGGATTACAGGTATGAGCCACCATGCCTGGCCCTTTTTTTCTTTTAAAAGTATTTTACTTATGTT
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AAGGGTTTTAAATTATAGAGAAGATGAAGTTTGATCAACCCAACATGTGTCCCCTTTACTAGTGGGAAGACACAAGGGC
ATTCATGTCACCATGAAATATTCTTATTAATTTATTGAAATACCAGTGTATTTGTGGCATTTTGGGATTACTATCATTA
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ATGATTCACCCATTGGACAAAACAATATAGTTCTATTCTAGCACTCAAAGGATGTAGTCATCACTTCCAAGAGTGAGCA
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TACCTCTGGGATCATTCTTTGCAGTTCTTGGCTCTTGGTTTCTGTAGGAGTTGGCAGGTAGATGCCAAATTTTCTGTCT
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TCTGGCCTTTGTTTTTTGCTTCTGTTAAATAAGGATGATGATAACAATGATGCTTATCTCATAGGGTTGCTGTGGGTTT
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TTGCTTCAAGTTACTAAATTGGTGACAATTTGTTAAGCAGCAATAAGAAACTAATACAGGACTTTCTGACGAGGCCTGA
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GGCCAGGATGGTCTCAATCTCTTGACCTCATGATCTGCCCACCTTAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGC
CACCATGCCCAGCTGGTAGTATATTATAAAAGAAATGATATTAGATACACTGTATTTTGTGTAGCCTGTGCCCTCCAAA
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ATTTACCCTGATAATGATTTAAAGCTGTGATGTGTTATAAAAATGAATTCTAGGAAATGTAGACAATGAGGAATATTTG
AGAAAGTTTAGAAGTAGAAAGAACAAGACTCTGATTAAAGAAGCTGATTCCAGAAAGATTGGAAAGGTTTCAAGAAGGA
GGGCAAGGTTGGCCATGTTGCCCACCTTCAGAGCTAGAACCAGATTACCTAGCTAACTTTGTCTATGACTTAAGAAATG

Fig. 9.53

AACTGGGATAGAAATTAAAACATGCAATAATATATTTAGCATTTATTTGTTGCACTGTAAAATTCCCTAAAGGTTATAA
AGAAAAAAAATATACGTATACATATATATGTATATGTGCATATTTCACCGATTTTTAAGCATATTATATAACATGAAAG
ATTTCTTACTTAAAATTATGAAGTAGCAAATGAAGTCTGGATCCTAGCTCATTACAGATATTTCAGGATTGGATTTAAT
TTATCATCTTTTTTCCCTTTTGAACTGGGAACAATGCCCTGATGATCTATTTGGAGAAGAGATATGATAGTATCTTACG
TGACCTGTGCTTGCTCTATTCTGTTTGCTGTTTCCTGTTTAATTCTGATGGTGTTGTGGATAAGTGAGATGACCTTCCC
TGGAGCAATTTATGAAAGCACTGTTGAATAGAGAACAGAACATGGTGGAATATTCATGGGCGACTTCAGTAGTTCAGGA
TTACTCTCAGACCGAATTATTCTTCGGAGCTTTGCTGAGGGCTTAGAGTACCCTAGGCAATATAAACGTTTCTTTGATA
TGCTCCTCAGTATTTCTTCTTTTTAAAGAATCCCCAAGAGGATTTGCACCTGAAACTGTAGCTAGTGCCATTCTTTTTT
GCTCTCCTTTTTCTCCTCCCTTCTTTCTAACAATTCAAAATGTTGATGGTGTTTTTTTGGGGGGAGAGAGAGATGGCAAAA
AGTGTCCATTGGAATTTATAGGCATGTAGGAGAAAACTGCTTTCCCATACAACATTATGATGCCAACACTCAGTTGTCA
TTTTGGGGGATTGTTTTTGAACTGAAGGAAAATGTGTAGCAGCACTATTGGATAAATCAGCAATCCTGGCTCACCTGTA
TCTTTCAAGGAAAGGAAGGCTTGGTGACAGTGTTGAGGGCTGTGGTAGTCACAATAACAGCCACTCAAAAATGTCTCTG
GAACCCATGAATATATTTTGACAAGGGGGGAATAAGTTCATCAATCAACTGAATATGAGATGGGGAGATTACCCTGGAT
TATCTGGGTGGCCCAGTGTAATCACAAGGGTCCTCAAGATGGAAGAATGAGGCAATAGAGTAAGTGTCAGAGTGACGC
AGCATGAGAAAGTCAAGCATCACCCAGTCATTGCTGGCTTTGAAGACAGAGGAAGGGGCCATGAGCCAAGGAATAAGGA
CGGCCCTTGGAAGCCAGAAAAAGCAGGAAAATAGATTCTCCTCTGGAGCCTCCCAGAAACTAATGCAGCCCTGTTGATT
AGGCCAAAAAGATCCCTTCTTGGCCTCTGATATCCATAACTGTAAGATCATAAATTTCTATTCTTTTCTCACTAGGTTT
TCCATTAGGTAGTTACAATAGCAACAGGAAACCAATATAGGAGCTTTCTGAAGAGCCTGACAGTTGTAAGCTGTAAGAA
TCTGGAGATCAGGTAGTCTATATTTGTAAAATAAGTGATATTAAACATTTTAGAAGTGGTTTGCAACTCTCAGGCAAGT
CATCATTGAGTTCAATAAGACTCTAGAGAAAGAGGTAGCAACTAAACATAATAGAAAACCCATCAAGGTCTATACACGT
AGAGTAAATGAAGGAGACTAGCCTGGTTGGAAGAGAATAGAGGGGCAGGGGAGTGTGGCTGACCAGAGAGTACATGGCC
AGCTCCTCATGGTGATTGTTGCCGTGAGGAAATGTGACCACTTTTGCTAGATCTAGTTTTTTCAAAAGATGCCCGCATT
TTGAAATGTAATGTAAATTATCCTAATATTTAACTCTAGACAATTTAAGTAAAAACCAACAACCAACCAAATGAACCTC
AACACAGGACGGGTATGGCCCGTGGGCCACCAGTCTGAGACAGCTAATCTAGAATTGCAGTCAGCCGGAGTGACTTGTA
TTTTCACGGTTCTGAGTGTAACACCCACAGTTCCACTTTAGAGTTGAAGAAACTGACGTAGGGGAGTTAATAATTGAGC
TAGTCAATGGTAAACATAAGGTTTCAAATTGCGGTGTGTCTGATTGTGAACGCCAAGTTTTTTTCCATCTCACTGCCTC
TAAGGCAAAGGAGGAGATTAATAATGGAGAGATAAAAGGAGAAATGGAAGGAAAGAGTTTAATATTTACTAAGCACAAA
ATATCTACCAGGCATTGAACCAGGGATTTTAAGCACATTATCCTTTAAGTCTCACAACAATTTTAAGAGGTAAGAAATA
TTCTAATTTTCCAGGGAAGAAACCTGAGTCCGGGAGAGGTCAAGTAACTTGTACTTGGTCACACAGAGAGTACGTGTCA
AAGGAAACTCAAAAGAACACATTTTCTCAGTGATTACAGGTTTTAGAGAAGAGGAACAATGCTTCCTCTGAGCCTGAAG
AAAAGAATGAAATAAGGGCTGCAAGGGAACATGCAGGTTTCACACTACAGGAGCTTGTCTGTCTTGGTGCAAGTGGGAG
GTAAGGCTATCTGGTAAGCTTAAGAATAGTTTATAAGGGGGAAGCAGGTGTCAGACTGGATATTGCAGGAGAAAAGAGG
CTGCCACCAGGGTGACCTGTACAGGAGATGGAGACATGATTTGGAATCAATTGGTGGACCATTGAGAAAGGCCAACAGA
CAGGAAGGCTTTGAGTGGAAAGAATGTACAGACCCCTTGCTTCTTTCCTCAGCATTCCTTGCAGGTGGTAACCAGAGAGG
AGCTGAGTGCCAGGACTGGCCATTGGCTTGGTAAAAGTTGAAACCTTAAGAAAGCAGGGTGGCTCAACTTCATTAGCCA
GCAGGAAATGCAAATGAAATCTACAGTACCACATCAATACCATCTGACATCCATCAGGATGGCTAAAATAAAAAAGACT
GACAATGCTGTGTGTTGTGAGACGGTGGGGCAGCTGGTATGCTCCTAGACTGCTGGTGAGAGTGTAAATGGGTAGATTC
AGTATCTATGAAAACCATTTTCAGTATCTACGAAGGCTGAACCTATGTAATATCCTATAGCCTAGCAATTCCGTTTTTA
TAGTCCAGTGGAAATGTGTACATTTCTGTACTGAAAGACATATGCATATAGTAGCATTATTTATAATGGTGAAAAATGC
AAACAACTCACTAATGTTTGGTGTACTGACAAAATGAAACACGCAGTAGCAATAAAGAAGAATGAGCTTCAATACATAC
AATATGGATGAATCTAAAAAATAAAATGTTGATCAAAGCATCCAGATACAAAAGAGTGCATGCCATGATTTCATTTACA
TAAAGCTTAGAATCAGAGCTCTGGTGTTAGAAGTCAGAATGGTGGTTATATTTCAGGGGAGAAGGTGCCTGAGATAGAA
CATAAGTGGGCTTCTAGGGTCCTGCAATGTTCTAATTTTTTAAATTTTATTACCTGACTGTGTTCACTTTGTGAAAATC
CACTGCCTTTATGATTTGTGTACTTTCTGTGCATATATTATATTTCAATAGAGAATTAAGATAAAAAAATATAAGGCCC
AGGTTGGAGTCTAGGATTGTGACAGGGCAGTGTTGAAATTGTTGACAAGTGCAGCTAGGAAAAAAAGGCTGAGTTGTTT
AATGCATCTCCGATTATATTGGGTAAAGGGAGCTGGGGAAATTAGGGACACAACGATGGTGACAGGAGAAAGAGAATC
ACCACATGGCGGACTGAACGGGGAGCAGCATCTTGCTGTGACAAAGTCCACCATGTACCTGTCATGGGAATGATGATAC
AATATTACATCAGCTGCATGGCTATATCTAATCCTGTTTCAGAAGACGTCAGCAAAGGCCATTCGCGTAGTGCAACCTG
GGAAGGAGTTGGTTGTTTAAGGTGGATACAGAGTAGATCCTGATAGCTCACTTCTTGACCTTGTTTAATTTTTGCCTGT
TAGTTCAGCACTAGAACTCTGTACAAAAAAATTTAAGGCTGCAATATCATTTTAATCAAATCATATGCAATGAAAACAA
AGCTTTTGCTAGAGTTGTGAGCTCACATATGGTTTCTCCTGGTTTGTGGTCTCCTAGGGAGAGAAATGCAGCAGGTTGA
TGATAATGTGAACAGCTAAGTTCCCTGGGTGGCTTTAAAGGGAAAGGGACAATTCACTCATTTTGTGTATTTACTAAAA
TCGCCTTCTCTCTCTCAGTTTCTCTCTCCTTCCCTCTCTCTCTCATTTTCTCTCTCCCTCCCTCTCTCTTACACACA
AGTGGGCATGCACGCACGCACACACACACACACACACATATACACAAAACTAGATTTGGGATCCTTGTTTTAGTAATGACT
AATCACTATCTGGGTATCTTGGTTAAAATAGAAAGGCCATTTGTCTCATGAATCAAAGGTTAAAAAATGTTCTTAAAGG
ATTAATTTCCAAAATTGCTTTCAAATAGCGTGGCTGACCAGCTTTTAGCAGTCATCGTTAATGAGAATGATGGAAAATT
AAGGTCAGGTTTGCATTTTCTTTCTTCTTATTACTTCCTTCTCTTCTAGGTTGATTTGTATTCTTGCCTTTCCTTATAT
ATTGCTTATCTTCCCACAAATTTCATGAAGATAATTTTTAAGTAAGTTTCATTTCTAATTTTTCCTTAGTTCCAGAGAT
TCTGTTGAATGTAGTCGATGATATGTTGTTACAACACCTCTAATGAATTATAAATAGTCCATTATATAGCGCATACCAA
AGAGACCTTCTGATTGAACATGCAAGTTGGGGCCTTTTAAGAACGAAAGGGGGTGCTATGAACACCAGGGCAATGGCTG
TGAACCAGCACTACTTGGGCAAACTGGGATGTATGGGTACTCTACCCAGAGGCCTCTGGGGCAGGAGCTGGCCTTGTGA

Fig. 9.54

AGGCTCTGTCCTGTTAGGGGAGCTGCTTTCTGGCCTAGCCACTCTGGACTGAGTAAATTCACAGGTGTTCACTCAGCTA
GGTTTTCTCTCTGTGATAAATCCTGCAGGGGTTCTCTAATTTAGGACTTTACAGAGGCACTAATTGAAAAAAAATGAAA
CTAATGCTAGGAATGCTCATGATAAGGCCTAATTACAAATGACATCTGTGGATACTACATGAAAGGTTTTGGATATGAT
TTACCAGTTCTTTCTTACTAAGAGTCTGGTTAAAAACTCATGAATGAATATCACTCACAGAATGACCTCGATTCACGTC
TGGTCTGATTTTTTTTTGTGTGTGCATGTTGACTTCTCATGTGAGCTTTGTTCCTGCAGACCCCACACTTAGTCTTATA
TGGTCTTCGTCCTACTCTGCCTTGTTCTGGGGTGTGGCTTTCATATGTTGGGGTCTTATGAATAGAAGCAGACAAGCCT
CAATCTCATTAAACACAAGGTTTTTGTTGGTTTTTCTAAAGGCAAGGTAAGGAAGTCCCTATGACATGGACCATGGTGC
GCATGCTCCTCGTGGCTTGTCCCTGGGCCTGGCTCATGAGGTTTCACTCCCACTCAACCCCTGTCTGCATCCCGCCTCT
CTCTGCCTTGGTGCTCTGGTCAGTTGACTCACTGTTCTGTCCTGTGCACTCTGTTCCTAGCTGTGGGAGTTATTGGGTA
TTGAAGAGGCTTAATGCCTGCCTCATCTTTCTGTGGGTTCTGAACCCATGGGGAAATAAAGACGTGGAAGTCAGAAGAG
GATCAAAATGTCCTCTCTGCTAATGGTACCCCTTGTTCTGGTGGCGGTTTCCCTGGGCTGCCCACCATTCCCCTCTGTG
CTGAACTCACCTCTTCAGTCACAAACAAAGCAGCAGCACCTGCCCTGGTGGCTTCAAACAAGGAGGACAGAAAAACATC
TGTGCTGTCAGGCTGGTGGCCAGAGTGGAGGGAGAGTGGAAAAGGGGAGGAAGACAGGTAAGAAGAGAAAAAAAAAGGC
ATAGAAAGCAGGAGAGGAGAGAGGAAGACAGACAGGGTGAGGGAGAGTGGGGTTCAAACAAGCAGAACACAGAGGAGAG
AAGGAGTGGGACAGCAAGAAACTGAGAGAGGCTGCCAGCACCATGGCTGGGTTATGGGTGTGTAATGAAATATTTGAAA
TATTAGTCCATTCTCACACTGCTATAAAGACATACCTGAGACAGGGTATTTTATTAAGAAAAGAGGTTTAATTGGCTCA
TGGTTCTGCGGGCTGTCCAGGCTTCTGCTTCTGGGGAGGCCTCAGGAAACTTACAATCATAGTGGAAGGCAAGGGGAAG
CAGGCACATCTTCACTTGGATGGAGCAGGAAGAAGAGAGAGAGAGAAGGGGGAGCTGGTACACACTTTCAACAACCAAGTC
TTCTGAGAAGTCTATCACGAGAACTGCAAGGGGGACATCCCGCCCCCATGATGCAATCACATTCCACCAGGCCCCTCCT
CTAACACTGGGGATTACAATTCAACATGAGATTTGGGTGGGGACATAGAGCCAAACCGTATCAGAATTTTCTCAAGGAT
CAAATAATTCCCTCTTCTGGCCCTCACGGAAAATGAATGAATGCTAGAGCAAAGGAAAGCACTGCTTTCTCAATACCAA
CAGGTGTTGATGGTAATTCCTGTTTCATGCATTAAAGCAAAATGTGGCCAGAGGGAGAAAAGGGTCCCCCTAACCCCCA
CATCCTGCCAACCTCCCTGCCCCAGAACACAGGTCACGATATTCCCAGTGAAACTTAATATCGTGACTGCCAGAATGTT
ACTATTCAGCCATTTCATGCACAGTGCCCTAGGGGTTGCAATGGCATTCCTAGACAACTGCAATGCCTTTCTAACATTG
TTGCTGAGGAATGTGAAGCCACATCGTTGTTACCTGTAAACTGCAGAACACAAGCCTTCTGTCTGCAGGAGGAGGGTAC
GACTTTTCCTATTTTAAATAAAGAAAACTTATCGTTGTTATTTTATAAAATGGGTAAGTTTATGAGCATAATGGAGATC
TGTTCTTTGAAATATTTGCAGCTTGGACAAAACCAGGGAATTGTAGAGCATCAAAAACATTTCAATGAATCACAATAAA
TCTCCTTCTCCATAATGCTTCTTTCATATTCACTGTCTATAAGATCTGAAAAAGAACGCTCAGTAATGACGTACAGAAT
GTGCTTTCTCTGGAGAGGGCAGGGCAGAACAGGACAGGTCAGGGCTGGACAGGACAGGCAGCTATTTCAGTCCAAGGGG
AAGCAGGGGATCATGTTAGAGTCTGGGGACTTAGCCCTGGTGATTCCTCCAAAAGAGTCATAGGAGCACTTGAGCTGTG
TCCTTCTGATGGGCTCAGAAAAAAATTAATTTAGTATTCAGTGCTTATTCTTCAGATTCAAATAGTACAGAAGACTATAA
TGACAAGCATACTGAGCCAGGGCATCAGGACTCCCACTGGAAGGCCCAGAGTAGCCAGGTCCCAGCAGGAGGGAGAAAC
ATGAAATTGAACTGTGAGATAGGACAGGAGAAATTTCAGATTAGTATGACTGGGCAGCTTGTGGAAACTCATATTCTAT
TAAGGAGTAGGAAAGATGACCTAGTTTGGGCTATTAGGATGAAAAAAAAGAAAAGAAAATGTTTTTTCAAAGTTTCCAT
TTGGTGTATAATTTTTTTTTTTTTTTGATATGGAGTTTCGCTCTTGTTGTCCACGCTGGAGTGCAATGGCGTGATCTCA
GCTCACTGCAACCTCCACCTCCTCCTGGGTTCAAGTGATTCTCCTGCCTCAGTCTCCTGAGTAGCTGGGATTACAGGCA
TGCACCACCATGCCTGGCTAATTTTGTATTTTTAGTAGAGATGGGGTTTCTACATGTTGGTCAGGCTGGTCTCGAACTC
CTGACTCCAGGTGATCTGCCCACCTCGCCCTCCCAAAGTGCTGAGATTACAGGCATGAGCCACCATGCCTGGCCGTTGT
AGAAATTTTATTGACAAAAAATTCTTCTTGTAAATTGCTTTTTATCTCCCAACAACAACAAAAAAAAAATTGGTTCTCCA
AAGAGACTGTGTATCCACCCACCCGGAAGGCATGTTCACCAGGACAGAGTGATCTCAAAGATTAGGATGAGTGGTTGGA
GCTTGGATTTAATTTTCTCCTCTCTTGGTCTGGTGTGACACTCACTTATTTCCCTTTTTCAAAAGTTCTAGAATCTGTT
TCATTTAAGAGATTAAAAAACAAGTAACTGATAAAAAAATTCAGATATTCATGCCCTTTTAATCTCTTGACTTGCCAGG
TAAATCTCCTGGTTGAATTTCATGTGCATGTTTATTTCATTTGCATGAAGTTTAAATTCTCCCAGGGCTGTACNGCTGC
AACTATTTTTGCAGATTCTTCACTGCACAAGTTGGCTGGGCTGCAGGGGGTGAGTAAGTGCAGAACGGCAGCCACACTT
GGCTTGGCCAAGCCATGCAGTGTGATGTGAGTCTGTGCCAGCCCAGAGGGAGGGATATCTTTTTCTCTTTCACACAAAG
GGCTAGTAAGTGGCCTTGATTGCCACTAAGGTTCATTGACATCATGGCTACCCTGAGATGTGCCTGGTACAGTGCTTCA
TGCACATTGTTATCTGGTAAATGCTTTTGATGATGGTCCTACATATATTTCAATTCAGTGGGAACATTATATGTGTTTT
ACTTAGGGAGAACTTCACCCCAAGTGCCTTATGCTTGAAACAATAGTGGTGTTTTAGCCTTTGAAGACACTTGGTGTAT
GATCTGACTTTCTTCTTCTCTTGATCTTTGGGGCAGTTATACTTGAGGGTAAATAGGCCTCAAATTGCTTGGTGTCCTA
CAAATAAACATAAAGAGCTTAGCTTAGATATAAAAACCCTGAGAAATGGGGAAAAAAAGCATGCTATCTGCACAAACAA
GGGGAAAGGCAGTAGGCAGGAACAGGATGGAAGTCCATGGAAGATGCTGTGATTCCTTTCCTGCTCAGCTCCTCAAGTC
CTGGTTCTTGTTTTGTTGAAGAACAAGCAGAAATAGTGGGATTTGGGATTTAGAGTTCTGGAAATGGCCAGATTTTTTT
TTTTTTTTTTTGAGACAGAGTCTTACTCTGTCACCCAGGCTGGAGCATAGGGGCATGATCTTGGCTCACTGCAACCTC
TGCCTCCTGGGTTAAAGCAATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTATAGGCATGTGCCATCATGCACGAA
TAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTCTAACTCCTGAACTCAGGTAACCC
ACCCGCCTCAGCCTCCCAAAATGCTGAGATTACGGGGGTGAGCCACCACGCCTGGCCGAAATGGCCAGATTCTTAGATG
GCCTGAACTATGTAAGTCTGTTGTTTGATTTGGTTAATCTGAGGAATACAAAGTTCAAGAAATGTTGTAATCTCAGCGC
CCTTGGTACAAGAGTGCCTGCTCTAAGCCTTTGCTGTTCAGGGAAACTTGATAATTTAGGTGTGATATATTTATCTATC
TATTGATTCATCCATCCATCTATTTATCTGTGCTATTTCTTTAGTACCAAAAAAGGCTTGCTTGCACAGGTTGGGCAGG
TGTTGTAAATGAATGATGCAGAGAGAGAGATTTAAAAAACCGTAAGGAGTGGTAGGGACTTGACAAATAGAGTATTTCCCT
ATTTATAGGGAGTGGCCACTGTCAATCTTGGGATTCTTGTCTTGCAGAAAGGCAAACATGCAGCTTTAGGGGGGTCCAT

Fig. 9.55

ATCTTCTGACATTTCAAAAGGAGCTGGAAATCAAGATGTGAAATCAGATTATTTAATATTGACAATTAATTCAAATGTT
TGTGCTAACATTGCAAGACTTCTCCTCATGTTGTTGCATGCCAAGATGGAGAAAATATGTTGGGCACGTTAGGTATTTA
TGTGTCAGTTTGTGACCTCTGCTCTGGTATATAAGTTTGCCCTTAGAAATATGTTCCTGTATTATTTTAAAGTTGAGTG
GGAAGCTTCTCTACTTTTAATGAGTTTTAAAGGAGAGATGTCATCTACTTATCCCTCTATCATTTGGAGGATAGGCTAG
TTATGTCACTTGGATTATACAAATAAACATTGTTGTGGGTTATTTAAAAAAAATTTATTTTCTGAAGCGAGTCTATCAA
GGTTTTTAAAATGTGGTTCTTCATGGACTTCCAAGGAGGTTTAGGATTGGCAGTGAAAAGAAAGAGAAGAATGGGAAGG
ACACTTACATTTCTGCTTCTTGGGATAGAGGTAATCTGTATATTTTGGTTTTAAAAACAGATATTTAATCTTTTAGGCA
CATTAATCTACATTTCTAAGAAGAAATAGGAAACTTCTTGATAGAAATGCCACCTGTTTTAACGACTAAGCACCAATGG
CACTCTGCCAAGTTGAAAACAAATCTAGGTAAATTTAAATTGGGCTGGCATTTCACAGAACTGGTGCAAGCATGGTTCA
TAAAGTTTATTTTTTTGCTTGAGAAAAAAATGACATTTTACTGATTCTGTGTAAGAAAACCTTTAAGTTTTTATCAAAG
ACTATTAAGATCAGAATTCAATATTTTATGATAGTATTTAATATTTTACAATGTATTAATTTACAATTAAATAAGTTAT
TTAATACAAATAACTTAATATTTTACAATAGAGTTGATTATTTTTCTAATGCTTTCCTAAAGAAATTCTGTAAAGATCC
ACATAATTGCTAGACCAGTGATAAAGCATGTAATTTCCCCTATCTTCAATTTTTCCTTACTGTCTACCCTCTAAAGTAG
TTGACAATGATCTTCTGATAGATCCTGGCTTGGGTAATACATTACACTGGCAGAGTAAGAATTCAGAAAATAGCTCAAC
AGGATCCCTCAGTTTGGCTGGTCTTTCTGAAAAGACAAGTGTGAGCAGCCTGAGGAGAACCTGGAACTCAGGTATTCTC
TGTTTCAAACTCAGGAAGGCCTGGGTGAATTCCTGGTAGAGCTGGTAGAACTAGCTTTCTATTATGAATATTGAGAAGT
TTGACCAATTTTATCAGGCTTCTGGAGTGATATTTGCATAGTTACAACTTAATATCACTTTTCTACTTAACACTCACCA
GTAACTTCCACCTACTTGGGCCAGCCCATGTAGTTCAAGGTAAAGATCTTGGATTTTATTCCACATAAGGTAAAGATCT
TGAGCTACAAGATCTTGAACTACTGAAGCTCTTGAATTACACGGGCTGGCCTCTGCCTTTCTCTCCAACATCATCTCCA
GTGACACTGGCCTTCTTTCTCTTCTTCAAATAGACTAAGCTCTTTCTCACTTCAAGCTCTTTGTTGAACCTGCTAGTCC
CTGTTTCTATATGGCTCTTTCTCCAGATCATTGGCTTCTTTTCATTTGGGTCTCAAGTCAAATATGACCTTCTTAGAGA
GGTCTCCTCTGGTGATGCCACTTCTCCTATCACAGTATCCCATCACTCTGTTTTATTTTCTTCATAGCCCTTATTTGAA
CTTATCTTACTTATTATTTGCCTCTCATTAAAATGTAAGCCTTGTGAAAGCAGTACCTTCTCTGTTGTACTTTATTGCT
ATATTTTCAGAATCAAGGACAGTATCTGGCATGAAGTGAGTGCTCAAAAGTATTTGTTAGATGGACGAATTACAATTTG
CCCACATTCAGTGGCTTTACTTGTAATCTGTTTGACTCTTGATTGGTATGTAATTTTATTATATGGAAGGGATGGAAAG
AATAGGGTTCGAGGGTAGTGAGGAAATAGTAAAAGATGGTACTGTTGGAATTAGCTACATGATTTGAGCAGCAAATTCC
AAGTACGGCCTTAAAACAGAAAAAGAAGCAAATATATACTACTTGAAAGTCAGACTGTATGATAATCTAATGGTAGATA
TAGTTATATAAATCATACACACTCAAAGCTTTACCTCTATAATTCTGATAAGAATGGAAGGCTGATGACATTTTTGCA
GACCATTAAATAAATGTAGTGAACTTCTAGTTTGCTTTGAGCCTATCTGCATGGCTGATAAATGCTTTTCCAATAGAAA
GAAGGGAAAACATGCATTCAAGGTGATAAGCAACCGGTGATAAGCACAGCTAGAGACAGTTTTTAAACCCTGAAACTCT
GTGGTTACTCATATAATTGTTTATAAGTGGCTCATTGGGAACCAAGGTAAACAGAATTAATCTTTTAAACATCAAACAG
AAATAAAATAATATTTCTTTTTTTTTTTTTTTCTTGAGATGGAGTCTTGTTCTTCACCCAGGGGGCTGGAGTGCAGTGG
CATGATCTCAGCTCACTGCAACTTTCACTTCCCAGGTTCAAGCGATTCTTCTGCCTCAGCCTCCTGAGTAGCTGGGACT
ACAAATGCCTGCCGCCATACCTGGCTAATTTTTGTATTTTTAGTAGAGATGGAGTTTTGCCATGTTGGCCCAGGCTGGT
CTCAAACTCCTGACCTTAGGTGATCCACCCACCTCAGTCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGTGCCT
AGCCAGAAATAAAATAATATTTCTTATCTGTACCCTAAGACATGTTGGACAGGAGATGTCCCATGAAGCTGATGAAATT
TTAACTAATGCAGTAAATAATCCATTGAGATTTAATCCTCATCAATCATCATCCTTATTGTTACCATGTGGCAGAAAAA
TGTGAAATTCTGTTAAATGCTTCATCTTGATGGAAAAATATGAAATCCTTGTAAATAAAGCTTGAAATTCTCAGGTTCC
CAAAAGATGACTCATCTGACCTTCTACTCATCTTTTTAAGACATGAAACAAAAGAAAGCAAATGGGTTTCTGTGGCCAA
AAGAATTTCATCAACACCAGTCCATGGGAACAGATCAGACATAGGGAAGGTGGGTCTCATGACACTTTTTGGTTTATTT
CACATCTCTTGAGCAGAGCTCTCAGTATAATCTCCTCAACAAGAATGTGTATTGCATTTCTGTAGGACATAAATTGCCT
TCTCTCCTCACTATTCCCAGCACTGATTACAAGCTTCAGCAGAAAGCAGAGTTTTAAATTCTTGTGGAATTAATAAATA
GATAAGAGTAAAGGTATTTAGGGGGAGACAAGGACATAGCCTGTAATTTAGGTGAGCAAAATCAGTAACTGTGAGTCTG
GGCTGTGACATGGTCCTGGCTCACTATTATTTTTTTACAAGTTTTAGGATCTTGGCGTTTTATTTGCTTTATCAATTAC
TGTGGACTAAGATGTGCGACTGTGATGTGGATTAAACAACAACAATTTATTTCTTGCTCATGCTGTCTGTCCATTGTGG
GTCAGCTGAGTGCTCTGTTCATTCTTGTCACTCAGGCATGGGTTGATGGAGCATCCACCATCTCAAACGTTGTTAATTA
CCATGCTTGGGAAGAAAGGAAACTCTAAAGGATGTTACCCCAGGTGGTTAAATAAGCTCATGTAGAAATGGAATGTGAC
ACTTCAACTCAAAACTCATTGAACAGAACTCAGTGTGCCTGGCCCCACCAAAACCATCCACAAGGGAGGGCAGAAAGTC
TAATTGTGAACAGAACTAATGATATTTACTTAGTATTTGTCTGCTTGATTTTTGGCACAGACTGATTTATTAGAGTGGA
GAAGGTAAGCTGATTATCAAAGAATGTCTTATTTTCCTCATGTAGTTACCATTGATTTATTGAATCATGATTTCATTCT
TTAATATATTTTGCATCAATGATTGATTAATTTTCACAGCTACATCAAGTAACTAATTATTGATTTACTAATCAATTAT
TAAATTCTACAAATTAAATAATATTACAAACTAAATTCAATCCTTGAATGTATCCAACATTTATTGGAACCAGTCCAT
GGGAACAGATCAGACATAGGGAAGGTGGGTCTCATGTGCTTGATCATCTACTATGTGCTTGATCACTATGCTAGATACT
ACATTGTATGGCTTTGCTGAATTATTGTTAAGTCTTCACTCACTTAGCTGAGCTCAGAAATGAATACATCTCAATGCAT
GCAGAGAAGGTTCTTATTGAGGCTTACTCACTTTGTAGGGTGTTGGTGGCGTTTGAGATTGTGTTTTCAAAGTGCTTAG
CACTGGCGATAGTGATGTTCATAATGATGTTGCAAGTTGACTAGGATTTGATAGTTCATTTCCTAAAATAATTTTTATT
CAACTAATAATTCAAGTAAACACTGCTCACTTGATGATTAGTCGTGGAGTGAAGACTGCGTTGTGAAGCTCACCATTCA
TTCTCTAACAGTGGTCTCCTGAGTTGGGACACTTACATAGGATTTATTTCTGATGATAACAAGAGCACAGATGCCAACC
ATGCATGTGATAGTTTCTGGGAGAAGACTTGATGATTCAGCACTGTCCCTATAAAATGACAAAAGAAGACCCACATATA
GCATTAGGTATGGATGAAGGTACTTAAATTTAAGCTTAATTAGGTGTAAATCCTTAACTCCTATATTCTACTCTCTGGT
GCTTTGAAGTTGGCCTCTTCGGTCTCCAGCCACAGAAGGGATTTTCTTCGCTGACCACAGTTCCCCACGTTTTCCCTTC

Fig. 9.56

AGTAAATAGCAGATGTGTGTGGTGGTAAGCTGGTTTTCTGCCATTGCTGTGTGAAAAGGCAGATATTCTGAATGAGGAT
TGTAAGTTATTTTTGTGTTACACATTCTTCTTTAGCTTTTTTCAAAAGCAATTGCATTTTAGTTGAATGTGAAAATTTA
CTCTTGATGATTTTCTCAGATTAATGCTGTCATCATGTTAATGGGGTAATGCTTCCTTCTGCAAAGATCTTGGAATTTA
GGGCTTCTGGTCAGTGTTTTACAGCTTTGTCTGAGAAAGAATGTAATATGAGTATGTTTTTGGTACATGACTTCAAAAA
GCCAAGTCTGCTTTGCCTGATTTTTGTGTGAGCAATCCCACCTGTCTGATCTCACCCCTGCTCCCAGGTCACAGATAGA
GGAGACCTTGTGCCCTAGCAACAAATCACATCCACTTTAGCTCTATGGGGACATTTCAACAACAAGGTTCTTGTTGNGG
CTTACCCACTTTGTAGGGTATTGGCGGTGTTCGAGATTGTGTTTTCAAAGTGCTTAGCACTGGCACAGTGCTGCAACTT
GCAGCATAATTATGAAATACCTTAACAAAAGGTATTTACAAAAGCATGAGAGGATGAATGTGAGGAAGGAGCATGTCAT
GTTGGGTAAGAAAATATGGCACTAGAAACATGGGAGAAGGNGTGTGTTTTGTGGGGGTAGATGGATAAGAAAGAGAACA
GNTGGATCAGACACCAATTTACCAAATGATTCCATAATATTAGTGCACAGATAATGCACAGATAGTGTGCAACAACAGC
TTTGGGAAAGGCAAACTGACTGTCTATAAAGGTCAGAAGACATTTTATAAGATGTGTTTTACTGAAAGTGTTGTCCTTG
TGAAGAGGTTTTGAGCAAATATTTTAAGAAGTCTTTAGGGAACAAGCAATTTTCCTTTTTGTTGCCCTTTCTAAGAATA
AGACATAAATAGGAAGTTCCATCCTTTTATTTGTTCTATTCAAATATTTATAGGGGAAAATCGGCTACTACTTCTTTAT
AAGACCCACCTTTGAAACTCATTATTTTTCCAAGGTGCCTTGTTCTTATAACAATATTTTCTTCTATGTTTGTTTATTT
ATTTATTTTATTGAGATGGGGTCTCACTCTGACACCTAGGCTGGAGTGCAGTGGTGCGATCCCAGCTCACTGTAGCCTC
TACCTCCGGGGCTCAAGTGATCCTCCCACCTCAGCTTCCTGAGTAGCTGGGATCACAGGCTTGTGCCACCATGCCCGGC
CAATTTTTTGTGTTTTTGGTGGAGATGGGGTTTTGTCATGTTGCCCAGGCTGGTCTCGAACTCCTGAACTCTAGCAATC
AGCCCTCCTTGGCCTCTCAAAGTGCTGGGANTACAGGCGTGAGCCACAGTGCCCTGCCTATAACAATATAACAATATTC
TGTTTAGGCTATGGAAGACCACATATATTCTTACTTAAGCACTTAGAATGGAAGCCACCTGAAGACAGAGGTTATATCT
TCACCCTTGTCACCCACACATAATAAGTGCCCAATTGATGTCTTTTGATTAATTAAATGAATTAATTAGTGAATGAAGA
CAGACCTAGGACTCCTGATAGAAAAAGAATAAAAACTTGCTTCTGTTTGTCCTTCTACAGTGAAAAGATTTCCTAAATA
TCACATATAATACCAGCACACATATCTTGTTTGCTAGTGATTTGATTTCATTTATGTCTGTTATTTAAATTCAGGGAAA
AACATAGGTAGTTTTTTCTTGTAATATCTCAACACTGAACTTGAATGAAACCTTATTAAATAATGCGCAAAATTAACTA
TTATATTTTGCTGCTAAGGGGCTTTGGCATTTTGCTTTGGTAAATTATGTCGCTGGTCTGGAAGACTCAGGCCCTGGGA
TGACAGGCCTATGTCACAATGGGTGACATGGGTTGGGAAAGATGGCTGGCTGTCCTGTAAAGTGCCTTATGAGTGTGAA
GCCAAAGGCAGTGCTTGGTACCACCCAGGGAATATCTATCAGAATGAGATATTTTATTGGCTTCACATACCATACCATA
ACATGTCTGATACAGTCAGCCAAAACAAGATTATTTATCAATGCCTCTGCCAGCTACCCAAGATGGTTAAGAGAACCAA
AAGCCAAATGCAGTGATCAAAAAGACTGCTGAAGAAGTAAAAGGCAAAAGGATGAAGAAAAACCAGCCAGGAACCCATG
TTTTGCTTCTATCTCATTCCCTGGGAATCAGCAGTGTATGAGCATCTATCTCTATATAATCCGTCTTCTCTGCAGGCAG
AAGGGCTACTCCCTTACTGCACCTGAGTCCTCACATTCTCAACCACATCAGTCACTAGGAAGCGGTCAAGGGAACACCA
CAGTATAGCAGAGTGGTCAAATCTGCAGGCTCTGTTGCCAGACTGCCTGGGTTCCCCTTCCTTTTCTATCACTTATTAC
CTTGATAGTTACTAAACCCTCAGTGCCACAGGGTTTTGATCTATAAAATAGAGAAAGTAATAAAAATGTTATCTCATAG
GGTTGTAGTGAAGATTAAATGAGATACTGTGTACTTACTATGTATTGTATGGCTTTTGTTAATAAAGGCAGGGTCAGGA
CAACTGCATATATGTGGTAAGTGGAGATGTGAAATATGTATAACTGGCCACCTAAGTTCAGTATTTGAGGATGTATGAG
AAACGCTAGTTGAATAAAAACATATTATTATTACTTGTGTTGTTACCATTACTACTGATGTTATTACCAAGCAGATGTT
AAAAATATTTCTATATGCACTATGGATCCTACTTCACTTATGAGGAGAATAATATAACCCAAAGCTTTTAATTCTCATT
GCTTCAGTCTTTCAAATGTTTTTGTTCTCAACTTTACTGAGAGGTAGCAGAAGCCAAAAGATAGAAATCTAGTAAAAAT
TCCAAGTAGAAAGACATAAAAGTTTAGTCTTTGAAATGCAGTTGGTCTGGCATAAAAAAATAAAAATCAGGCTCTAGTCC
CAGGATAAGATAATTTTTTAATGAGTTGAAATTGTAGCTAATAGAAAGTTGAATATACAGATAAATGAATTGAAAGAAG
GCATGGCATGGTTTATTCATAACAGATGTTAAAAGAGTAAGAGTGATTTTTTTTTTACAAAGACAACTCAGAAAATAAG
CCAGAGAGTTTAAAAGTGAATTCACTGCACAGCTTGGTTCTGCATTCATAAATACAATGAAGCTCAAAAAATTATTTAG
TAGCAGAGGCTTATGAGAAGAGCTTGGTTCTGTGGAGCAGCAACATGATAAAGTTAGATTTTTGGGGCCTCACCTAACC
TGTGGGACAGCTCTCGGGCCTCTGATTTCAATTATTCCCTGCTTTTTTTTTTTTTGGTATTGCTGCAACACATCTGTCTC
CTGGTACCCTCTCCTTGCCCTTTCTGTCTGCTTTCCACTGGGATTGAAATGCTTTTCTTTCCTCCACCTCTGTTTCTAG
TTGCAGTATTTTTCTTTATCAAGCTCATTTTTTCCCTAACCTGTAAAAACATCACCAGTGAATTTATGACATTGGAGCT
AGTAGCTGTGTTGATGGACGTGAGTGTCCAGTTCCATAGCTGCATGCCAGATGAATAGCAGTAATAGAGCTACAGAGGC
CCTGCCAGCACAGCCAGACATGATGCACTAACATGCCAGTTTCCTTGCTTCTGGTGCTTCCAAGCCATGGGGCCCCTGG
TGATATATACCGTTAATCAAACAAGTGTGATGAAAGCTAAATGAAGCAAATTTAGTGTGTGGCATCAATATCAACATCA
TTTATTTACTCACTCATTTTGGTTCACTTGAATATTCAGTACTATTTTTCCAATAGTAAATGATGAGAAAATAACTTTT
TAAAGTGGGGGGAAAAGAAGGAAAACTAGTAAATTTCTCAAAAGAAATAAATTAGAAGAAGGTTGAAGCCATGTCAAAT
GGCTTCAATTCAGACATTTTTAATCATAGGTAGATATTGGTGTAGCCAGAGAAAAACACAGTATTCATAAAAATTATCA
TTCAGATGTGAATATGCTGATAGTAATATTACTATCTGGATTTCTCCAGATTCATAAATTATATAAAAATAACAACTGC
AGCCCAAGGCAGTCTATTTAAATGCGTGAGGAGTAAGGCAAATGGTATTCGGAGAAAAGCATTGACAACTTGGTTAGGT
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CATAATAATCACTCTGTTTTGTCAGTGAGAACACTGTTAATATTAATGGGAATGTAATGCTGAAGTTCCTGGGGATTGA
TAAAAGGGCAGCTCTAGATNTGTGAGACTGACACGCGGCTCTGGGGGTTCCTGACCAGTTAATTATGGACCCCCTGCAG
TTTTTTTCACTCTCTTGGGAGCATTCCCAGGACCCCTCCTGAGGCATTTCTTACTAAATGTGAGAGAGAACTTATTTTC
AAATTCCTCTGAATTGAGAACCAGACTAGATGTAGGGATAAAGTGAAGTACAGTTGATCTTTGANCAGCACAAGTCTGG
AATGTGTGGGTCTGCTTATACTTGGATTTTCTTCTGGCTCTGCTACCCCTGAGACAGTAAGACCAACCCCTTCTCTTCT
TCTTCCTCCTGAGCCTACTCAATGCAAAGATGATGAGGATGAAGACCTTTTGAATGATATGGTTCCACTTAATATATAG
TAAATATATTTTCTTTTCCTTATGATTTTCTTAATAACATTTTCTTTCCTCTAGCTTACTTTATTGTAAGAATACAGTA

Fig. 9.57

TATAATATATATATAATATACAAAATACGTGTTAATTGGCTGTTTATAGTATTGCTCAACAGTAGCCTATTAGTAGTTA
AGTTTTTTGGGAGTCAAAAGTTATACTCAAATTTTTGACTACACGTGGGTTAATGCCCCCAACCCCCACCTTGTTCAAG
GGTCAGCTGTAGTAGATTAAAAGGTTTTTCATGTCTGGAAAGATTCTCTATTCCTGGACTGGTTCAAGGAACTTAGAGG
TCAATCTGAATTCCAAGGAGTGAAGGTACTAATGGTTTGATATCCAGGTGTACATGGCCCTCTGCCAGGAGACTGTAGG
GAAAGTAGATTATCATCATCCAACTTGTCCAGTTGTGCAGCCAGATATTCTTGCTGACAATGTGAATATTTACCTATGA
ATACTAGAGTACTAGTCTAATGTGCAACAAGATACATTTGCAAAGTGCAGGGAAAGTATAATAGTCAGGTGACCAAAGG
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GCAGTAGTGGCACATAATTTCTTGATCTTGTGTGTTTCTGTTACGGTAAAAATAAAAACAAATATAAACAGTAACAAAG
AAACAGCTTCCAGGAAACTTATTAGTTATTCCTCCTATGTTACATGGCATTTCCATAATTCTCATCTGTATTAAGTTTG
CTGTGGGAATGGCAATCATAGTATATAGCCCTTACCACCAGCACTGCCTTCTCACATGATTTATTGCAAATTGGTTATA
TTGGAGAGTGGATTCTGCCAAATGGGTAGCCTAATTAGTAGTCAAATTGTTGTTTTCTCTAGTGATTTATTATCAAGCG
TATTAATTTCAGTGTCCAACAGAATGAAATAAATGTCTTGGACTATTTTTTCAATGACATTAAAAAATGAAAACTAACC
CAGAGACCAATTACATTGAAAAAAATTTATTTGAGCCAGAAAAACGTCCNAGTACTGGGCAACATCCCAGACTAAAAAT
GGTTCAGAATGCCCCAACCTCCAATTGTGGTGACTTAGATTTATAACCAGAAAACAGGAAATAACATATAGAGATTACC
TTGTTGGTGCAATTCAATGTTTGCCTTATGTGGGCATAATTTGGCAGCTTTCAGCCTGGGAATTGACTGAGGATTTGGC
TGCTATGATTGGCGGAGAAACAGTTGCTTGGTAACAAGGGTATACTCCTAGATTACAGCTTGCTATGTATGGAGACTGC
TTTGAGCCAAACTTTACTACCAAGTAAAGAATCTGCTGTGTGCCAAACTTAACTTTAACACATCTCAGCATTGGTCTGA
AAATCAGTTCACAGTATTTGATAGTGTGCCTTGCCATTTTCTGTTACACACTTTGTTCCCTGTATGAACTTCTGTTTAC
TTTGCACTATTTCTGTATCTGCTACTTTGGAATAAAAGTAGTCAGTATAACTTAAATAATGTTTCTTAAATAGTCAAAT
GAGAGTGATGATTCAAATATACCTCCTTTCCCCCATTTTCTTTCTAAATTATTCACCTCTAAGGTAATTATAACTAAGT
TTCAAGGTTTGATTTGGAACATTTTTCATATTTCTGTCACTTAGTTCATAGATGTTCATATTTCTACTGTATTATCTTA
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GTGCTCTAGGAGATGGAAATTGAAGACCCTGGCCCAGTGAATTTCTCAGCAAATGTTATTGGCCGCCTGGTCAATATAT
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TCTCTTAGTCTTCCCTGGAGATAAGGTACTGAATCCATGAAAGTGCTAGTCTGTTGGGGGAATTCTGCTCACCAGAACC
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AGGGCCCATTTGCTAGCAGTGTGGGTGTTAAGAGGCAGGATGTAAGGTATCACCTGTGCTGGTGAGGAACACAGTGAGG
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TAGTGATCCGCTGGCTTCCTTGCTGGTGTTTGCTTTCTAACTGTGGCAAAGCACTGTGGTTATGGAACTGGCAGTGACC
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AATGAGTTACACTGGTGATATCCCCAGGCCCATTAATTTTCCTTATAAAATATCCCTTGAACTGTACTTTGAAGCCCAA
CAAAATTGAGTTGTTTGAGCTATAAAAGCAAGAGCAGGCAGAAATGCAGAATCTCCACAGGAAATGTTTTGCCTTCAGG
GTCCTGTCATTCAAACTAGAGATTGAAAATACCAATATTCTAGCTAATGTCTAAGGCTGCTTATTTCTATGGCTGAAGG
CACAGGGCCAATTAGAGGCCAAAGCAGTGGGTCCTATCACCAGGTAAGCCATTTAGTTTTACTCTCTTTTGTGGCCTCA
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TTCTCAAAATTCTTTAGTAATGATGGGTCAGGAGCATCATCTTCTAGAAGGACTGTGCATCCTAGTCAGTCTCCAGAGA
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TTCTGCAAGGTCATCATGGACCCAATTTCCTTCTTGTTCTGTTATCCATTTTCTAAGCACATGGCTCACATTCTCAAGA
TCAACTCATGATCCAAGATAGCTGCTAAAGAACTAGATATCATCTCTGATTTCCAGCCAGCAGAAAAGGGAGAAGTACT
CTCCTTCCCCAGAGGCCCATGCAATATTTCCTCTTACATCTCTTTGGCCAGAATTTTGTCACATGGCCTCACTAAGCTG
CAAGGGAGCCTGTAAATTTAGGCTATTTGGCCAAGCAGAAATATACCTAGCAAAAAAATGGGATTCTGTTATGAAAGGA
GAAGAAGATGAGTGGATATTTAGTGGGCAACTCTAATCTCTGCCATAAAGTAGGTGATCTCTGTCATAAGACTGAGCTA
GACGGGGATTATACTATGCTGTTGTTGACTGTGGCCTTTTGGCTCTGTGCTGAGGCTTTCTTTTCTAGGGCCACAAACG
GAGTTTCTCACATTTACTTCTGGATGATCCAGGAAACTAAACTGGTTTTCAGAGAATACTGCCAAAAATGCCTGAGCAC
ATGCTCAGCTCTGTGAGATCAGCAACGGCACCTGAGACCTTTTTATCTGCTTGTTGTAGTTTTTAATCCACTGAAACAA
TAGCAGGTGTAAGCTGGAATTCTTTGGCACACAGCCTCTGAACCTTGGCTCATGTTCTCAGATAAATGCCTATAGCAGC

Fig. 9.58

TGAAGCTCTTGAAAAAAATTTAAGAGGAGGAAACAGAGTAGGGATCTTTTTGGGGTCACAGTCTAGGTGTTTTTAGAGC
CACTCAAACTCGAATCAAGACCCTTTGATTACCATAAAAAATCTAAAATAAGATGTTTTGTTTGGCCCAAACAGTTTTA
GAAAAAAGTGAGCCAAATCTGAAAATTAGTTTATTTCATATATATTGAATAGTTAGGCCATTTGGCCACACCTGTCCTG
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CTAGGCTGTGACCCTTTCTGTGGATGGCTCAGGAGGTAACCAGTGCATGAGAAGTTTCTGGCCTACCTCAGTTGCTATC
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AAAGATCTTGACAAGGAAAGCCTGAAGGCTTGTCCAGTATGAGGTTGCCAGGAGTCATCTGTGGGAAGACACGGAAGTG
CACCTAGGAGCAGCTGGTGTCTCAAGACTGACTGATAGGCTCGAACCTGAGCCATGGTTTACAAAGCTGACACCAGGAT
GTAACTATGGGTTGTAGCCAAGTTGTTCCAACACAGGTGGAGTGAACTCCTGTGGTATTTTGAAGTGATAATTGGCTAG
GGTAATATTTTCAGGGTGCTGGTTCTAACAGATGGTGCTATTTGAAATCCTTCCCTATAATCTCCATGAATGACTCTGT
AACCTACTTAGGAGGCTTATTCAAGTGGTTCAAAACCTAGGCCTGTATTCCAACTGGTTGGCAATCTGTTCATTGATGT
TGTTATCTGAATTCATGAAGTGGGCATTACATTGTTTAAACAAGAAGTATACACAATTGCTTCCCAATCCACTCTCCT
CTCAAAACATGTACTGATACATGCATGTATATTTTTGCCACCCTTAAAAATTCACTTTGTAATTACTTTAATGTTAATG
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AATTTCAGAAAGAGTCCTCTTACCTTCTTCCAGCCCAAGTAAGTGATTGGATTGACGTTTGTATTCATGGACTTTGGCT
TGAAATGAAATCTTTTAATTCTGCCTTAGATAGTAAATGCCAACAGTTTAAAGTGGCATGATTCGATCTTTAAATTTGC
CCTACTGATGAATGGTGCAAATAGGAAAAAGGAAAATAAAAAGTATTTGCTACCTTGAGAAATACACTCAGTCTCTATT
TGATTTTCCTTAGATGTGGGGGTCTGTAATTGTAAGATCTGTTTTTATTCATCGTAACTAGGAAAGCCTCAACATTTTA
ATTAACAATAGTAATATAAATTACATTAGTTTTATTTCAGTTAGAATTTTTTTCTTTCATGTATTTAATACGAAAATAT
CCATGCAAGAGTTCCTTCAGCTTAAGTCAGATGTGTTCAGTGGCTGGGGCAGTGCATTAACTATAGTCTGCATGTGAGA
AAAACAGCAATTGGCTTTTCACTAGTATTTGTCATTGCTCTATCCTAATGCATTCAACATTTTCCTATTGTGCTATGCT
CCACTGTATATCACATTTTACCTATTTGATTCCAAATTTACTTTGTGGTATTAGGTTTTAATTTAGTAATTTACATACA
GCTTGGAAAAGTGATTCCTTGAAGATATTGCTTTGTATCTACATGATAATTGACACTATTTGTATTAATATTAAAAGCA
TTAACCTCTTTTTCCTAGTGGTCCCCAATTTCATTCTTAGCAAAATAAAATTACAGATTCTGTTTTCAAAGAAAATTTG
TATATGGGATTTCTTTCCATTCCTTATCTAATGTTAGGATACTGAAGTTAAAGTATGCATTTTCTGTTTTTATATATTT
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TGCTGGCTGAAGGGAAGACATGTTGAACACTTTTATTCACCCTATATTCACCCTGAATTCTCTCCCCATGGCCAAGGGA
CAGTATCAAGACTTCTGTTGTTTCACTGAGACAAGTCAAATTAAGAAACACTTGAGTGTTTATTGTGTCCTTTGTAGGG
CTTATGGGCATATACCTCAGCAAAGTAGGCGGCAATAATTTAGGTCATGCCCATTTAATTTCAAAGGCCAGCTTTAAT
CTTTTGGGCTGATTGTGATTACTCCAAAAACGGCAGAAAACAACTGAGAAGGGAATACCAGGTCCAGGTTACAGTTCTA
TGGAGGTTTTGTGTAATCCTGAGTTTTCGCTTTGCAATTTGGCACCATGATAGCTTTTGTATTTTCTTTCCTCTGTTCT
ACTTTTTCCCATCATGGCAGGTGAACTTCTCAGTGTGCAAGGAATTATATGTAGCTGACTCTTCCAGGGTATGAGAGGT
GGGCTGAAGCTATCGGGATAGCAGCTGGCTTCAGTAGTGCTTTTAGCTGTCTAGACTTGTGCTTTCTCATTGATTTTGG
TGTCTGGGCATGTCCTTTACTTTCTAAATCATGTCTGCATTTAAATATTTTAGAATATTTTATCCAGCATTTTTTGTTG
TTTTTCCCCAAAACTAGTATTTTCAATATTTCTGTGAGAGAACAGGGAGTCCTTTCTAGTATATTGCTGGAAATAAAAT
ATGCAACCTATTCTCTACACAACAGTCAGGGTGATCTTTTAAAGTATACTTTAGATCATGTCAGTCCCCTACTTAAGAC
CTTCCACAGCTTTTCATTGCTCTTAGATTAAAAGCAAAACCCTTTATGTTTTCTACAAATGTCTGCATGATCTGGCTCC
TAAGAATCTTCTTTCTTACCCACTCTTTCTCCTGCTCCTTAACTTCCAGCCACACTGGCCCTCTCTGTTTTTTGAACTA
ATGGAGCTCATTCCTGCTTGGGGCCTTTGCACTTGACATTCTTTCTGCCCATGTCCTGGACACACTGGCTCTTATGCAT
CATTCAGTTCACAGCTTAAGTGTCCTCCTCAGAAGGACCTACCCTGTCCACCCTACTGAAAATAGCAAATTTGCTATCA
CCCAATCATTCTAACCCATCACCCTGTTTAATTGTCTGCCTTAAATTGTTTTGTTTGTCTATTTGTTCACATGTTTACA
ATTCAGAATATAAGCTCTGTAGGAGCAGGAAACTCTTCTCTCTAGTTCATCACTTCAAGCCCATTACTAAGAACAATGC
ATTGTTTGTGGAATGAATTAATGATTTAAATAATTAGCCTATATAGTGTCATTTCCAAAGTTGGCAGAATATCATCATT
GGAATTTTGTTCTTAAGGGGAACTGGGTTATAGAAATGTGGGAAGAATACTTAATTAGCATTGAAAAACAATGCTTTAC
TAAGGAATCAAAATCATGAAATGTAAGAGCAAATAGGAGTGTTTATCCCCTTTATTCCAGACTCTATTTTATAGATATA
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TGATTCCTGCATCATGGCTGTTGCTTAATATCTCACCATGAGTCATGGCTACTGCCCAGTAGATTGGGCACAACCATGA
ATATTAGACTGGCAATTTGCTAGAGATTTTGCAAAACCATGGGAAATGGATTGAACAAATTTTCCTGTCATTTTTGTAA
GAGGCAGTAAATAATGGTAATTTGAGTATTAGAGAACAGCATCTGAATACTTTTTCTAAAATTCTACAAGGTGAACATA
GAAAATTGTAGCTTTCCTTTCTGCCTATTGCTTTCTGAATGTCAACAGATTGCTTTCTTCAGCTTATGTTAGAATGTCA
CCAGCAGGACCCACATCTGACATGCTCTGGACTGTCAGAGCCACTCAGCACTAGGAGAACTTTCCAGTTGAATTTCTCT
TAAGAAGGTCAGTAGGAATAAGATAAACGAAAAACTTATTCATCATTACCATAATCCTTGTGAAAGTGGAAAAGTTCAT
CCTGGCAAATTCAAAATCGATTACAAACTCATGCATGTTGCATATGTATTTTTAAAGATTTTTACAAACCCAAATAAAA

Fig. 9.59

TAAGTAGAAGAAAACAGTAGTGATAAATTTAAAGTTCTTAACTGAATGAGTAGCTTTGAATTTTACTCAACGGATATAA
GCTTTGGTTTTTTTTATAAAAAAGAAAACAGGTTTGTTAAGAGACTATGAACATATTTTAGAAATGCTTCAGTGATTTT
ATCATTTAAATAGAAATTTGGATTATTCTGGAAAACAGTTTGATAATATGTTTCAGGCATTTGAACATATTTACTCTCC
TGGCCCAGTAATTGCAGTTTTAGAAATTTATCCTATTTTAGGAATCTAGCCTAGAGAAAAATCTGAAATTCAGTCATCT
TGGCATAAGGATGGTTGCAGAAATACTATTAATAATAAAAAGTTGAATAGTACCTAATATTCAAGTAGAGGTATAAATA
ATTTGTGGCAGGTTCATTTGCTATAGTTTTATGCAACTATTTAACAAATATAAGTAAGATTATTTAAATGATGAAGGAA
AACTCTTTCAATATAATGTTAATTTTTTTTTTTTTTTGGAGAGGGAAGAGCTCTTTTATTTAGTAATTCCTGACACAT
TTTAGATGCTCATCAAATAGTTAATTTTCTTTTCATTGCTTCTTACTTTTCTCTCCCTTTATTTATTTATTTATTTATT
TATTATTATACTTTACGTTCTAGGGTACATGTGCACAACATGCAGGTTTGTTACATATGTATACATGTGCCATGTTGGT
GTGCTGCACCCATTAACTCGTCATTTACATTAGGTATATCTCCTAATGTTTTCCCTCTCCCCCTTCCCCCACCCCACGA
CAGGCCCCAGTGTGTGATGTTCCCCTTCCTGTGTCCAAGTGTTCTCATTGTTCAATTCCCACCTATGAGTGAGAATATG
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CCTGTATTGCTTTCGTAATAAGACTGAGGTAGTTGGTGAAAATTTGAACAATTCTTGCATAAAGATTTTATTGCATAGG
TTATAGGATAAAATGCAAGAGAAATGTTTTGTGGAAAGAGTACTTAGTAGAGAATCAGAAAGGCTTTATGGGTCCTTCA
TTTTGGTCACTGTTATACCTTTGTCTAATAGACCATTGATATAACTTTCTACTCTATAAGAGATTGATACCTAGTTAAG
GAAGGTCATGATATATTCACTTTGTTACAGGAAATTTAAGGTGCCCAGAAAAAAAAAAATCAAGAACCAAAACTAACGAA
TAGAGAGCTCTATTGTTATTGACTGAAGTATAAACTTAGATCCCTTAGCAAAGCGAAACTCACAGTCCATACAAAACCC
CTTGCTATGTCCGTTGGAGAAGGATTGGCAGCAAGATAGCAAGTATGTGGAGGATCATTGTTCATGAAGCAGGGGTAGA
TAGGAGCCTTTTCATATACTTCTAACCTTTTTTATTGTCTAACCTATTGTTATGTTGTCTCATTAAGAAGAGGCAATAT
AATGTAGTGGCCAAGAGGTATGACTTAAGAATCACTGGACTCAAAATTTGCCAGTTTATAACTCTGTAATCCTGGACAA
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TTGAACCAGAGAGAATTTAATTGGCTATGCAGCTGAGGGAAGAGCTGAAAAGCCAAATGGGGTCATTAAACAACCCGAA
TATTAGCAATAGCAGGAAGCATCCACTAATTCTAATTTGAAGGGACAATATGTTGGAGACAGTGTTACTGGGTCCACAG
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CAGCAGACCTAGTTCATTGATGACAAGAACTGAGCCACGCAATGTTCTAAAGAATCCAGGCAGTTTTAGGAGCATGATA
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TATCCTAGTCCCTTTAGAGTTGAGCTTAGCTTTGTCCTGCAAAACTGAAAGAATACATATTTAATTTTTTTGGTATTTT
CTGTAGCATGGCATTAAAATTAATAAATTTAAAGGAATAGAAGCTTGACAAGATGCCTTAATAGGCCCACCAGGAATAA
TCACATAGTTGCCTATTTTGAAGCATAGACATAAAATTAAAAAATTCCATCCAGATAAGTCACGAGGCTTTGCCAAAGT
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CCGATTATCCTATTCTCAGAAATAACATTTATTGATCTCAAGGAGTTAAACATTGTCTTGTTTTCTCTGGTTCTGTATT
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GTGCTTCACTTTAAAGACTAAGATACTGACGCAGAGGTTATAAACCTCCCCCACGGTCACAAAATCATGCTGCTGGACT
GAGCTCGCACCTTCCACTACTATTAATACATGGTAATGTTGACATCTTATTGTAAATGTTAAACAATAAAGCGTAAAGG
GAAAGAAGTAAATGCAAAAAAAATGGTCAAAGCAGGAGATGATTTTAAAGAGCATCTGGTTCAGTCTCCCCTTTTACAGC
TGAGAAAACCAATCTCTAGAAAAAAGAAATGAGCCTTTTGATTATAAAGCAGACTGCCTAACAAGTATCAAGTCATCTC
ACTTATTCTTCTCTGTCTTCCATGATCACAGAGTTCTGACCATGTCCTGTGTCACTCTCAAGCAGAGATTGAAAATGAC
ATTCGTCCTTTACTTGTTCCAAGGAAGCAAACATTTTATAGTTTGAAACTGTTTCTCTTGCATTTGCTTTGCAAGAGGT
TTGCAGAAGTTAAGCCTCATGGAGTCTTCTCTCCTTAACTTAAGTGAGTGGATTGCTTATTGCTCTTCTTTGCCTGTAA
ATTCATGTTGATTAGACAGTGGTGGGGTGGAGGGCTGATGGGTCTGTGTTTGGTTGGCAAGCTAACTCCAGCATCCTAT
AATTACTACATTTTCAATCTGGTGCATAGTTCTGAGTTTTGTACATCCTTATGTGGCTCTACACTCTTTGAGGTTAATT
TTGGCCTTGGATGGTGCCCTTTTAAAGGCAGGGTAATAGCAACACAGTGTTTTTGCTTGGGAAACGCTCTGTGTATGGG
CTTCTTCTCTTGGTTTTAAGTATTAACAAGGTAGTAAGTATGAAAGGTGCTGTGTTTGGAGTCTTTAAATGGACTTGGC
ATTTGGCTTGTCTACAATCTTTCAGGAATTTTAATCCTGATATTCAGATTTGAGTCACACACCTGGGGAGTGGTGACCA
TAGCTCTTCCTTACCCCTCCAGCTCCACTTCTGGGTTAGCATGAACTGACCACTGTAACCTGCTCTCAGGCTCTACACA
AAGGTGCTTCAGAATCTGCCTGTGGCCACTTCTGTGAAAGGGCATGGTCACAGTCACCGTGGCATGGATAGAAAACTGG
AGAGCAGCAGGAGGAGCCCAGGGATAGAGAGAGGAGGCCTGGATGCCTGCCTGGGCTCTGTGCCATGCCTTGGGTAGGC

Fig. 9.60

CACTTGACTACTTTAAACCAAGTTGACTCTCCTGTAATGCAATAGGGGTTTAATGATCTCTGTGGCTCTAGAGTTTTGT
AGTTTCTACTGTTCTTTGAAGCATGAACATTAATTCAACAGAAGAAAAAAAAACCAAACATTTTTCATTCAGAACAGTT
TCAAGATATTGCTCTGACTCACTGGATGGCAAATCATAGTGAAAGGGAAGTCTGACTCGACTTCCATTTTGCATTACTT
TTGGCCAGCATGGCTCTTTATGGTGTACTTGTTGTATAATAAAACAGCTNTCTAGAGAATACTCTTACATTTACTTACT
GAGAGATAACAGAAGTTCCGAATAAAAACTCATAGAAATGGAAGACTNGGAAATTATTTTTTTCTTTTTTCTATTACAT
ACAGAGGAACAAAGGCTGATATTTGTGTTTATGCCCCTTTCTGAGGACAATGTCCTTGAAAATCCATATTATTATTATT
TGTCTTTATATGTAATTGGATTGTTTAAACTCTTCTCTGAACTTTGTAGCTTTTTCATTATATCTCTTTTGCTGGAATA
TTAATAAAACTCCACTTAAATAGCCACTTTATTCTGTAAATTTTATTTAAGGCCTGAACTTGGCCGCAAATGAGAGTAC
TTGTGGTTTTTTTTTTTTTTTTTTTAAATGATGTGACTGCTTTGTGAAGGGACATAATGAGTCTGTGTTCTCTTCTATT
CCTCTTCAACAACTTTGTCAGGAAAGAAGGCTATTATGATTTCTTGGAGATGTGGGAGGATTGTGGCATCACCATGTCC
TAGTCATGGATGAAAGNAGAAACTATTATACCAGGGTAACATCTGAGGCCTGAGATAAAATTCCCATTACAATCTCTTT
AAATATTTCTGTGTTTAAATGGGATGAGAAGACTATCCACTCCACAAANGTAATCCCTTTTCTTCCTCAGCCTAGTGAA
ACTTATTGTTTCTTTTCCCTAGATAAAAAAAAAAAAAAATAGGATGCTGTACAGNTTCTTTTGGCTTGTTAAAAGACAGA
TAATTCACAGATTTTGCTTTTCTGTAGCTTATGCAATGTCTGAAAAGGCGCTGTAAGCAGGGATTCCCTGAACATNGCG
CCGTGGGCCCGGATCCCTGTTTTGCTTTCTTCAGAGAGCTCACTGGCAGCCTCCCTGATGCTTTGTGCCAGTTTTTAGG
CGCTCCAAAGCCACATGCACATTGACATAATCTCCGGTGGTTTTGGCTGGTTTATAATCTGGCTTATTGAGGTTTGGTT
CAAGGCAGAGGCCTTTAGGGCAGGGATCTTCTGTGAGCTGAAATAAAAGGGTCTGGTTTGGAGGAGATTTGACTCTGCC
AAATAAAAGCGGCACATTTCCAACTGCACATGCTGAGTTGCCTCGGAACACATCCATGCAGAACACAGACATGCATTAG
GCAGCTAGTTTGTGGAAGGCAGTGTGCTGAGCACAAGGGGGAATAGAAAGACACATGGCTGCCGTGAAATAACTGCTTC
CAGAAAGCACATGTCGAGTTGGAAGGATGAGCCAGAAGACACACAGAGAATATTACTCAGCCTAAAATGTGACGTCCCG
AAAGCGTGCTAGTATGAGACCCACAGAGTTGGAGAAGAGATTTTCTTTCCAGTGGGGAAAATCCAGGTTAGAAAGACCA
GACAGGCCATATTACCGGAGGCACCCTTTATTTCAAGTTTGGCTTTTTGTGGTTTCGGTTACCTGCAGTCAACCGTGTC
CNAAAATATTGAGTGGAACATTTAAGAGATACACAATTCGTAAGTTTTAATTTGCATTCTGTTCTGAGTAGTGTGATGA
AATTTCATGCCATCCTGCCTGGGGTGTGTAGCATCCCTTTGTCCAGCATGTCCATGCTGTCCATGTGACTCGCCTGGAG
GTCCCTTAGTAGCCGTCTCATTAGCAGATCCACCTTCGAGGTATGGAAGTGCTTGTGTTCAAGGAACTCTTAGTTTACT
TAATAATGGCCCAAAGTGCAGGAGTGGGGATGCTGGCAATTTGAATATCCCTAAAGTGCTTCCTTTAAGCTAAAAGGTG
AAAGTTTGAACCTAATAAGGAAAAAAACAAAAATTATATGCTGAGGTTGCCAAGGTTTATGCTAAAAATGAATCTTCTA
TCCATGAAGATGTGAAGAGGGAAAAAGAAATTCATGCCAGTTTTGCTGTTGCACCTTGATCTGCAAAGGTTATGGCCAC
AGTGTGCAATAAGTGCTTAGCTAAGATAAAAAAGGCATTGAATTTGTGGGCGGAAGACATAAACAGAAATGTGTTCTGA
TTGACCGCAATTAGGTTTGGTACTATCAGTGCAGTTTCAGGCCTACACTGGGGGTCCTGGAACATATGCCCTGCAGATA
ATGGGGGACTGTCGTATAGAGCCCCTGGATACTAATGGTGCTAGGGATTCAGGCCCCTCTCCTATTTTGGGAAGGGGCA
ACCTCAGCATATAATTTTTGTTCTTTCCTTATTAGGTTCAAACTTTCACCTTTTAGCTTAAAGGAAGCACTTTAGGGAT
ATTCAAATTGCCAGCATCCCCACTCCTGCACTTTGGGCCATTATTAAGTAAACTAAGAGTTCCTTGAACACAAGCACTT
CCATACCTCGAAGGTGGATCTGCCAAAGAGACGGCTACTAAGGGACCTCCGGGCGAGTCACATGGACATGTCGTGTGTA
TGGAACCTTGGAAAGAGGCTGTCCTTACCTCCCTGTGCATTCTGGCAGCCCCTGGCACTGCTCATAGATAGCCATGTGA
CTCAGGCTGGGACTCTGACTCTAGAGCGAATGGGTTAAAGGTCAAGAGGCTGTTAGAACTTATTGTTGGTGTCAGTGGT
GGCGCCCATTGGCTTTCAGTGGCGGCGGCAGCAGCAGTGTCCTGGCTGTAATTCTTGCTACAGGATAGTGGTCGTGATT
CTTGCTCCTTGGCATCTTGCGCGCCTGGGTTTTTGCTCATTTTCTGTCCTTAGTGATGAAGACTTCTACTGAGTCTGAA
CCTGCATGTCCTTCCAATGGAGTCTACTTTTTTCTCCTCCAGCTAGCCAAGGCCGGTTTCTGTTATGGCAAGCAAGAAT
TCCCACAGCACCTGAGTGTCAACGGCTTTCATCGTTTGTGCTGACCCACCTGTGCAGCTGATCGTCTGCCTTTTTTCTC
CGGCTACTCACCTTCCTTTATCTACCTATATAACTCCCTGCTTTGAAGGCTGAACTCCAGCATTTTTAACTTTTCCTGA
GTTATTGAAGAGACTTTACTGTTTACTATTCCTCTGTACAGTACAACATCTTATAATTGCCCATTATACAGATTTTTTT
TACATTGTATGTCTTTTTTTTTATTATTATTTGTTTCTGTTTGCCTACTAGCCCATGAGGAATGTTTTTTGGTAGGAAC
TCTATTTTCATCTTTATAGTTCCAGATCCAGCTAAGATTACACTCTGGTTGCGTGACTGAACAAATCTGTTTGCAGGGA
GAGATGTGGTGTTGGAATTGTGAACCTATGGAGAATGAAAAAAATAGAATAGCTGTTGTGAGGCATTTACTCTGGTGAT
ACTAAGGGAGGAATAAAATGGTGTCTGAAATGTGTGAGGGCCGTCTGATACCGAGTAGTGTACATTTATTTTCCACTTA
AAAAAGTCTGGTTTATTTAGGTATTATTTATTTACAGTAAAATCCATCCCTTTTATTGTAGAGTTCTATAAGTTTTGAC
AGATGCATATAGTCATGTGTATACCACCAGAATTAATGTATAGAACAGTTTGATCACCTCCCCTCAAAAGCTCTCCCTC
CTTCTTATAGCCAGTGTCTCCCCACATCTTCAGCTCCTGGAAACAACTGATCTATGAATTGATATGTGTGTNTGTGTGT
GTGTGTGTGTGTATATATATATATATATATATATATATATATATATATATATAGTTTGTTTGTTTGTTTTTGAGACAAAGTC
TCTCTCTGTTGCCCAGGCTTGAGTGCAGCAGCACAATCTCAGCTTACTACAACCTCTACCCCCCGGGTTCAAGTGATTC
TCCTGCCTCAGCCTCCCAAGTAGCTACGATTATAGGTGCCTGCCACCATGCCCAGCTAAATTTTTTTTTTTTTTTTTG
TATTTTCAGTAGAGACAGGGTTCACCATGTCNGCCAGGCTGGTCTCAAACTCCTGACCTCAGGTGATCCACCGGCCTTG
GCATCCCAAAGTGCTGAGATTACAAGCATAAGCCACCACATCCAGCCTATCAATTTATATTTTAAGCAGTTATCATAGT
TCTACAACTTTCCAGAATAATGTTTTATACACCAGGAAGATAAAATAATTGGATAGTGGATTTTTGTCTAGGAATAGAG
TTGCTGAAATTAGGAAATTAAAATAACATGTATTTATACTAAAAATTATCCATTACTTATATAAAATTCAGTGTAATTG
GGCATCCTGTATTTTATCTGGCAACCCAACCCAACCCCACTGGATGGGTATTGCCAGTGTGGGAACTGTTAGAATTGAG
GGTAAGTGTGAAATTGGCAGACAGAGAAGGAAACTGCAAGAAGAGANCATGGATCCTATCAACAGAATCATTCAGCCAT
TCAGACACTTTGTGACAACCTAAAAAGAGAGGAGGGAGTGAGATTTTTGTATGAAGTAAGAATTCACTTGTTTGTACAT
GAACAGCATATGCTAGCCTGCTTTGAAGACTGAAGTTCTTGGCTTTCCAGTTTATAAACCAGTTCTATCTGGGCAGCTT
GCAGCCAAATTGTGTTGTGGAGGAATGGGACTCAGGAAGCACGGGCACCCTGAAATAGGTGGATGTGGTCTGTGGAAAA

Fig. 9.61

GGTGGAAGCACACACTAGGGTTCTACCCTTAAGAAAATGAACCTTTGCTGAGTTATCAAAGTGAGTACTTGCTATTTCT
CAGGATAGCCATGCCACAAACACATATTTACAGTAAAATTCAAGTTGGTAACAATTAAAATGACTGACCTCTAGTTTAT
CTATATATTATTGGAACAAAAGGGCTTACTGAGCAATGCCAAGGAAAGAAACTTCCAAGTGGGTTCTTCTTACTCTACA
TAAAAGAATAAACTATTTTAAAAGACTTTTGGCAAGTCCACTGTTTATACTACCATAAGTCTTACCTTTCTGTTTTAAA
GCAAGCTTGGCAGGACAGTTACTTGGAAATAAGTTGTCAGTGTTTGGTCGGAGTGGTAGCAGTTGTGTCTGGAATTCTT
CATTCTTTTCCTCGCTCTCCAATAACCTACCCTGTGAGGCTGTCTCCAACCCCAGAGCCCTGACCAAGTGACCATGCTG
CTAAGCTGCTTGATAATAGTTTAATATCAGTAAAGGGACACAAGTTTAAAATTATTTGACATATTAGTGCTATCAGTTA
ATGACTTAAAAATAGCATCTTTGGTTTCTAGGTGTTGACAAAGATTCTCTAACTTACCAAACTTTAGCCATGCTCCTCT
GAACCCCCTTCTTGACTAGGCCTTAACTTCCTATCACAACTACAGATTCTCAACACCAATGATTTCATCCACTCGTGCC
CCACATTAAAAGACTTACACAAACACTAGAATAATTTCTAACAGCTCAAGGCCACATCCCTAGGACTACCCTACCCCAC
TTAGGATGCCTGCCTGAGGAAGCTCAAGGTTGCCAGGAGAGTTTACTATTTCTTCTAGCCAACACCCTGGAGCTAGGCC
CAACCACCCTTTCTTAGAGCATTTACTAAAAAGGGCTTACAATTGTGAATCCTTGCCCTGTAACCTTTGATAAATATAT
GCACTTCCTACTGCTCAAGAGTGTCTTTCTCAAGGACCCAAGAGCCATTCTTCTAAAAAGTAACCATCAGGAGAGAGAG
GGCCTCTGTCTTTTGGTATCTGGGCAGATAGAATCCTAACTCCCATAATTGTCTAATCAACTTTAATGTTGACCAACCC
TTTGTAATTTTTCACTCTCTGACTTCACTGAGCCTGCTCTCACCCCTTCCCTTTTCTACTCTCTCATTCCTCTTCTGAA
ATACACAGTCTCCTCTGTGCAAATCAAGGTTGAGTTCAGTTCACACTGCACTCCCTTCCCTATTGCAATAGCGTATTAG
TGGTTCAAATCTGTCCTCCCCACTTTAACTAGTGTCTGGCTTCCTTTATCTCTGACAGTGTGAAGAATTTGGAAATTGC
AAGGAGCATGGGAAGGAGATGATTTGGGGTAGGCATCTTTTATTTTTTAAATCACATTGCATACAGGTGGCTGTCTCTT
CTGCTCATACTCCTAGAACAGGCCTTTGGTGTATTTTGCTATATATAGGAGACTGGGACTAGAAGGTCACCCTGTTCAG
CTGTTTTCAGACTATCATTAGGTTGTAAATGGAATCCATTAAAAAATTATATGGAATGCACAAAATAAAGCAGGTGAAG
GCAAAATTACTCTTATGGAAACAGGGGTAGGAAATCTAGAATCGTATTTATTCCTTCTTTTCTCTTTATACTTATTTGG
GGAGTCTTAGCCTCATTAAGAACAACTGGGAGGGTAAAACACAAGTTTACAAGAAAACTAGTTTCCTCCCTTTCAGAGT
TCTTTCCATCCTGGCAGCTGAATGGACTCAGCAGCTCTCGGGGGCAGTGGCTTGAGTGTGCTGGGCTTGTGTCTCCTAA
ATAGGAAATACTACCCACAATGGGATAAAGGACCCACAGGGACTCTATAACTGGGGANTTAGAGGACACATCTTGTGTA
ATTCTGGCAGAAGGGCTAGGCATGAAGTCAGAGCAGGAGATGACTCAGAAATCCTGATGCTTAGAGACATTACCCTGTG
GCTACTGGGATCACTGCGATGAACTTTGCCTGAGGTCTGTAATGTGATTTACAATAATTATTCTATTCCCTTACTCACT
AGCTTGACAAGATGAACAAGTTAATGTTATTAGCTTCTCAAATTGGAAGATGATAATTATTAGGTGGGTCCATTGGGAG
TCAGGCTGGGGTGAGTTGTTATCAAATCAGAAGGAGTTATCAGTAGGGCACTAGTAATCAATAATGATTGAATGTGGGC
TACCAGAATTTGCCTTTTCATGATGTATACAGGACTTGTTTACATAACCANGTCTTCAAGAAGATAAAATTAGGAAGAC
ATCCAGATAACAGAAATGTGGAGAGACCTTGATATCATATTATGATTGAGAAAGAAAAAACACATAGACATTGACATTG
GGAAGGAATGACTACATCCAGTTATGGCAGCAAAGCTGTGTGTTGATTGATATTGTGAGAATGAATCAGTGATTGGGCA
CTGTGGCTAGGACAGAAAGGGTGACCCTGAGAGCCACAGTGCTTTTGTGTGTGACAGCCATGAAGAAAGCTTATCTGGA
CTTGATATTGACCCGTTGTGTATTTCCGTATTTTTTCTCTCTTTTCTCTCCTTTTCCTCCACTCTTTCCCTCTTCTCTT
TCAACCTCATGTTGAAAAAAAACCTGAAGTTTGCTTGTGGAAATGGGTGAGATTTGTGAGTTATGATGAATTGGAATTA
TTTGCAATCAAATGGAAAGTTGTAACAACAGGTGTGGATGGATGCAGCTCACACATAATGCATGTGGTGAATTGAGGAA
GCTGGTAGAAGTTTGGGGCGTGATTGACAGGTTTAAATGTAGCAGAAATAGAGTAGTTGCTTTTGGCATTTTAGATTTT
TAAATAATACTTTGNTCAGGCCACACATTAGTTAGTCAGACACAGAGTTGGAACCATATTTGGAACCTTCGGAGCCTCC
ACGTGGGCTTGTTCATCGTCCTTATGTTAGGGTGACAAGGTTCGGAGCTAAAACCAGAGAGAGAAAGCCACAGCAGAAG
CCTCTTCCAGACCCACTGTGTCAGTTTTGAACTGAGGCATTTTCTGTCCACAGCCATATGCAGTGTGAACAGGCCACAG
ATGTACATCAAGTGAGTGGGTGAAATAACGTTTGGTGGGAAATGATGACAGTTTTATGGCATTAGTCCTTGAAGCCCCA
GGTGCACTTATTCATCTTTAATATATTTTAAGCTGTTAGCCTTGGGGATATTTCAGCCTGTTTGCANCTGTATTTTAAA
GATGAGCCCTGGAGTGAATCAGTGAGGGGAGCGAGTCATACCTGAACTAGGAGAAGAGATGAATGAATCTTTGTAGGAG
AAGAGTTAAGTGGATCTAGTTATCCCTGAACAAGGAGAATATATCAGGGTAATGAAGAGACCTAGAGGAAGGTCATCGT
TTCCTTTTAACCAGCCAGCTGGTTGACCTTCCTGCACCTGCCTTAGAGCCAACCTTGGCCTGGGCAGCTTGCACCAAGC
TTTGCATATGCCCCTTGGATGTCAGGATGCTATACCTGGATTATCCTGGCACAGAGCATGAATTATAATTCCTGATCTC
AGCATATTCTACCCTTTGACTTCTNTGTTAGGGATTTTGACTCTTCTGCTTCTGACTTTTCGATGAATCATGTCTCCTT
GACAGAGAGAAGGCTCTTTTTTTTAAAATGACTCATAGCCATATCTATATATAACCACTGAGTGATAAATAACTCATAG
CCATAGCTACATATGGCCACTGAATTGAGTGATTAATAATTCTGTTGTTATAAATTTGAGTGAATATATTTTGGTCAAT
TATGTGGTTGTGGCTATAAAGATAGCTAATAATCTTTATTAGAATTTGGATACTGTTGATTTTTTTCTTGTAATTTTAT
AACTTCCATTTCCCTGTGGTACATATGCAGTGTGGAATACTATGCAGACATAAAAACAATAAAATCATGTCCTTTGTAG
CAGCATGGATGCAGCTGGAACCCATTATCATAAATGAATTAATGTGAAAAACAGAAAACCAAATNTCCCATCTTTTCAC
TTATTAGTGGTAGCTGCTTATAAGTAACTGGACACACACAGACATAAAGATGGAAACAATAGATACTGGGGACTCCGAA
AACAGAGAGGGAGGGGGGCAAGGGCTAAACAACTTCCTNTTGGATACTATGTTCACTATCTGGACAACAGGATCAATAG
AAGCCCAAACCTTAGCATCATGCAGTGTATCCCTGTAACAAACCTGCATATGTACTCGCTGAATCTAAACTTTAAATTT
AAATTNNAAAAAAAAATTCAATGTTTGGACTTAGGCTTAAATTTCTAGAACTTTTTCCACCTCTAAGTTGTCATTATACA
AAGTATGTTTAATAGTAGCTGGAAGAGTTATTTAAATCCACACACTAACAGCAACCACAGTGAATACGGTTTAGGTAAT
ATTTTCTTTTATCCAACAGCTAGAGTGAGATGCACAGAACAATGAACAAGCACCTCAAGACCTTGGACTTGTTAGAGAT
TCAGAGTGAGTTTCAAAGCAAGAAAAGGCAGGAACATGAGTAGCATTCCTATAAAATAGCTACTGAAGCAGAGTAGCTA
AGGAAAGATGATTGTTGTAGAAACACAATCAGTGAAATAGTCTGGTAGAAAGACTATTCCTTAAAATTCTTATACTCCC
ATAGAATTTACTTCTAAACCATACTGCCCTTAGACTTGAGCAANAATATTCCCTGCCCAGCCCNGCATTTCAGAGGATC
CTAATTAAACCCTCCTCTTGCCTTCCCCTTCCCCACAGGGTGAGCATTCTGTAAGTCCAAGTAATCATATCCCCTAACC

Fig. 9.62

CTCCCATGTAAGCCATGGTCTGGGTATCTGGACTCTAGAATTTCCTGCCAGGGTAGTCCAAAACCAAGACACAGGTCTA
TCCTTCAGGGGGAAGTTTGCNTTCCACACAAAGGGAGGCCAAGGGGCAGGGAATGTGAATGAATGAGAAACCATGGCGT
CCATACATAAGTTTGCAAATCTCAGTGAAAGAATAAGTTGGCATGAAGAGAAGGAGGGGTAGGAGAGAGCCTGGGGGCC
AGCTTCTTCTGAATAAGTAAATTCTGGTGCAGGGCTTTTCTTAGGTGCGTTGCATATGTTACCTCATTTAATCCTGCAG
AACACTTCAGGGTAGTGTTCTACTGTCACATTATGGGACAGGGAAATGAGGCTCAGGGGAGTTAAGTAACAGACCCAAG
GCAACTGACTTGGTAAGAAGTTGAGCTGAGATTAAACCTTAGGTGATTGAGCTCTAAAGTGCATGTATTTTTCTACCTT
GTTATGCTGCCTGTGATCAGTATCTTTGCTTTTATAATTTCCCAGTTCTTTCCAGAACCTAGCCTGGTCCTTGCACTTG
GTGACATGCAATAAATATTTGCTGAGTAACTAACAAAACAGACCATTTATTCACCTTTACTAGTTATTTATTATTTATG
TATTTATTCACCTTTACTATTAATGGTATATACAATACAACAGTGGTGTAGGTGAGGAATTTCATGTCAAATATACTGA
AAGGGACAGTTCACTCCTGATCCATCTGTACTGGATGGATGTGTTGATCTCCCTGTGGCCATGTAGCTTTTGGGCTTAT
CTCTCCATTTGTCAGTTTAGTAAATTGCTGCAAATGTTCTGGCTAGCAAGGACTCAAATGTCCCAGAACAAACTTTTGC
TCAAAGAAAATATTAATAAACACCATATATGCTTCTGTAGTCCAAAATGTTTTTCTTTTCTTACTTAAAAATGGCACAA
ACTCTGAGTATTAAGGTGATTCAAGAAGTTGTGAGAATGCCTGTTTCTCAGGAGTTGATTGGCAGGGTCCCTCTGTTGG
TGCGGCCCTGCTTGTCTGGGCTGTAGTTCTTCCATGTGTGTGGGCCACCCATGCTGGCTCCTGGANTGGTCAGTGTGCT
GTCCTGGGGCTTGGTCTTTCCCTCCGCTCACCCCCACTTATCATGGATGCCAAGACCATTCTCTGCTGTTGGCAGAAAG
CCATGGAACATACTTCCCTAATTCCTGCTATAGGCTCATTTGGTATTTTCCCCATGTGCTCCCATTTGTACACTTAATT
GTTTGGGCTTATTTGTCTGTCTTCCTTGCTAAACTGTAGGCTCATTTGCGCACAGGCTTTGTGTCTCTCTTGTTTACCA
TTATATCATCACATCTAACACAATGCCTGGTACATAGAATACTTAATGAATTTTTACAGAATGACAATGGACTGCCATC
ATAATTGAGTCATTAACTACTTTTTCAAAAAAGTTCTAGCATTAAGGTATCAGATCAAAGTTTCCTTTCACAAAAATCT
TACATTTTCCTCTATACTGTAATTGTATCTACCTGCTTGGAGACTCACCAAGAGTGTAGTCACTGTGTACCCTCCCAGA
GTGACTTTTTTTATCTCATTTAGAACTATTTGTTACTGTGATTCTCTTAAGCAAATGGTTTTGCCCACGCAGAGCTGTT
TGCTCACTGACACAGGCTTAACTGGTTAAAGAACTCACAGGTTGTTTCTCACCATTAATGGCTATTATGTTATTTTACC
ATCAGTTATACCTCATTTCTGCTTCTATCTTTACAACTGCAGGCTTTGGTCATTTTTAAAGTCGTTCAAGTTTAGATTG
CATTGACATTAAATCAAATCATAGAGGACAAACAACTATATATTTTCACCGAGAGTGGGCACAGTAAAGAGTTCCCAGG
CTTTCTCTCCGACTTTTAGATAGGTCTTTTTCAGAAGCTTCCTATCTCCCTAAGAAGTCTGAGAGTTATTACAATTTCT
TTACCCTTTGCTTACATATCCCATCACATAGAAAACCATTTAATAGAATCTATTGTAGCAGAGGCAGAACTTTACCTCT
GCTCTCATAGAGTCCCAGGTAGAACTGATGGTGAAATTGACATAAGGTAGATTAATAGGTANATTAGTCCATTCTCATG
CTGCTAATAAAGACATACCTGAGACTGGGTAATGTATAAAGGAAAGAGGTTTAATTGACTCACAGTTCTGAAGGTCTGA
GGAGGACTCAGGAAACCTACAATCATGGTGGAAGGGGAAGCAAACATGTCCTTCTTTACATGGTGGCAGCAAGGAGAAG
TGCTGAGCGAAGCAGGGGAAGTGCCCTTTGTAAAACCATCAGATCTCATGAGAACTCACTCACCATTATAAGAACTGCA
TGGAAGTAACCCCCCACCCATGATTCAATGACCTCCTACTGGGTCCCTCTCATGACACATGGGGATTATGGGAACTACA
GTTTAAGATGAGATTTGGGTGGGGACACCACTAAACCACATTAATAGGATAAAAGCATGTAAGTTTTACATAACACAGG
AGCCCTCATAAGGAAATGAAGACCCAAACAAGTGGCCAAACCTAAATGCTTTTATACTTGGTTGAACAAAGAGAGACGA
CTGTGAAAAAGTAACTAAATTATGTGGGAAGACTAAAGGAAGATCAATAAGAATTATTTTAACAAGGTCTGTGTGTACA
GAATTCTCTTAGTTGTGACTCCCCATCAAAGAATGTTTCTTTTCTCCTGGCAGAAAGACAGCAACTTTCACATGTGAGA
TTTTATCTCCTGTTTTCAGGGAAAAAAGGGAAAAGATTAGGGTGCGCTTTTTGCATCTGCTGTTATTCAAGTGCCCTTA
GTTCAAACTAATCCTTATACCAAAATGGCATATTCTGGGGTACATATTCTGCCATTCTTCACTACTAAATAACAGAACA
TATGCTTACCTATGTACTAGCTATTTCATTTCTGGTATGTGCCAAACAGAAACATATATGCATGAGCCCAAAAAAATCT
ACAAAATCTTTATACCAGCATTATTTGTAATAATCCAAATGGAAAACAGTCCAAGTTTCCATCAACAGAAGAATGCATA
CCTAAACTGCCATATAGCAAATATATAGTGAAATATTATACAGCAATGAAAATGAAACAGTAGTTTTACTGCTATAGGC
AACAATATAGATGAATATAATAAACATAATGTTGACTAAATCAATTAAAAAAGAGTACATACTGAATGACTTGATTCCA
TTTGTATAAAGTTCAAAAATTGGTCAGATAATATTGCCATTTGGGAGATAATAACTGGGATCCTGTCTTTTTCCCTTGG
AGAGCTAGAAGAATGGACTCTTCTCAGAAAGGTGACCAAAACTTCATAAAATCTCCTTTCCCCAGAACATTATTATTTA
CTTACCTAGGTGCTGCCAACCACACCCCATTGTGTCCCTTTAGTCATTGTATGGAAGGAGGTCAAATGCCTTAGTCTCC
CAGTGACTAGAGCTAGATATCCAGCCATATGAACAGTTTGTTAAAACCAGGACTCTGAATTCTAATGCCCAATAAGGAG
GGTTGTACTTTTGTGAAAATAGGCTGGTGACAATTATCTGAGGTCAGAGGAAAGATTCTGTCATCATCATTGTCATGAT
CATAATTCTTATTTTGGTTTCTTTACTCATGTTTTTAAAAATTATATTTGTAGAAGCTATTATGTTAGGTTTAATAGAA
ATGTAGAAAAAACATAAAAATCATTTGCTCAGTGTGATGAATTTTCATATACTGAATATATCCATGTAACTTCCACATA
AATGTTTGCGATACTCATCTATATTGTTGCCTGTAACAGTAAAACTACTGTTTCATTTTCATTGCTGTATAATATTTCA
CTATATGTTTGCTATATGGCAGTTTAGGTATGCATTCTTCTGTTGATGGAAACTTGGACTGTTTTCCATTTGGACTATT
ACAAATAATGCTGGTAGAAACATTTTTGTAGATTTGTTTTGGCTCGCACATACACGTTTCTGTTTGGCATATACCAGAA
ATTAAATAGCTGGTACATAGGTAAGCATATGTTCTGTTATTTAATATTGAAGGATGGCAGAATATGCACCCCAGAATAT
GCCATTTTGGTATAAGGATTAGTTTGAACTAAGGGCACTTGAATAACAGCAGATGCAAAAAGGGCAGTCTAATCATTTT
CTTTTTCTTCCCCCTGAAAACAGGAGATAAAAACTCACATGTGAAAGTTGCTCTCCTACTACCAAGAGAAAAGAAACAT
TCTTTGACAAGGAGTCATAGCCAGAAGAATCCTGTACACACAGACCTTGTTAAAATATTCTTATTGATCTTCCTTTAGT
CTTCACACGTAATTTAGTTACTTTTCCACAATTGCCTCTCTTTGTTCAACCAAGTATAACAGCATTTAGGTTTGGCCAC
TTGTTTGGGTCTTCATTTCCTTATGAGGGCTCCTGTGTCATGTAAAAGTTATGTGCTTTTCTCCTATTAATCTATCTTA
TGTCAATTTCATTATCAGGTCTACCTGGGACTCTAAGAGAGCAGAGGTGAAATTTTGCCTCTGCTACAGTAGGTTCTAT
TAAACGGTTTTCTATGGCATGGGATATGTAAGCAGGGGATAAAGAAATTGTAATAACTCTCAGACTTCTTAGGGAGTTA
GGAAGCTTCTGAAAAAGACCTATCTAAAAGTAGGAGAGAAAGCCTGGGAACTTTTTACTGTGTCTACCTCAGTGAAAAT
ACATAGTTGTTTGTCCTCTATAATTTGATTTAATGTCAATGCAATCTAAACTTGAACGACTTTAAAAATGACCGAAGCC

Fig. 9.63

TGCAGTTCTAAAGATAGAAGCAGAAGTAAGGTATAACTGATGGTAAAACAATATAATATCTGTTAATAGTGAGAAACAA
TCTGTGAGTTCTTTAACCAGTTAAACCTGTGTCAGTGAGCGAATAGCTCTGTGTGGGCAAAACCATTTGCTTAAGAGAA
TCACAGTAACAAATAGTAGTTCTAAATGAGATAAAAAGTCATAAGAAACATTATGTACCTGATGGAATGTTTCAGGTGA
AATTGGGTCACTCGACTGGTTGTTCATCCTTACTTAATTCTTAAAATTTTCTGATGGCCTAAGAGTGAAAGTTTCTGAA
TTTAGCTGATCATATTTAGGAAAAACACAGGACAAAATTTAAGTTGCTGAATTAAAGTGTCTAGTGTTATCCCTGATT
TTTAGGCAAGTCCTTATACTTATCTTTTACCTTTAAAGGAGAGTCAGAGATACCTAGCAGAATGGTTAAATAAAAAGTA
ATGACAAGAGCAAATGCTTGCAAGGTTGTGGAGAAACTGGGCCACTCATACATGGATAATGGGAATGTAAAATAGTACA
GGCACTCTGGAAAAGAGTTTGGCAGTTTCTTAAAAAACTAAACATGTAAGTACTACACTATCCAGTAAATGCACTCCTG
GGCATTTATCCCAGAGAAATAAAGACTTCTGTGTTCACAGAAAAACCTGTATGTAAGTGTTTATAGCAGTCTTATTTAT
AATCGCCTAAAACTGGAAGCAACACAGATGTCCTTCAGTGGGTGAATGATTAAACAAACTGTGGTACATCTACACCACG
GAATACTACTCAGCAATAAAAGAAACAAACTACTGATACATACAATGATCTAGATGAATCTTGAGAGAATTATGCTGAA
TGGAAAAAGCCAATCCCCAAGGGTTGCATACTATATGATTCAAATTATATAACATTGTTGAAATGACAAAATTATGAAA
TGGAAAACAGATTAGTGTAGATTAGTAGTTGCTAGGGATTAAGAAGGGAAGGAATAGGAGGAAACTGGGTGTGGCTATT
AGAGGGGCAACATGGAGATCCTGCTGATAATGGAACTGTTTTATATCTTGACCATATCAATGTCAATATATTGGTTGT
GATATTATTACCATGGGGGAAAACTGGGTAAAAGATACACTGATTTTGTATTATTTTTTATAACTGCATGTGAATCTAC
AATTATCTCAAAATAAAAAAATAAAAAATAAAGTACAAGAGAGTCAGGGAAAGTTCTATGTAGTTTCTCTTAGATCAGT
TTTTATTTTTTAAACAGTTACCCATCCGTTTCTTAAATCTTATGGATTGTTATTAAAGGAAGGCCACTGCCTCTGCTTT
CCATTAAGGACAATATCAATCATCAAAGACATCTACAAAGTTTCTGAAATTCTTCATGCAGACTTTCAGGGGACCATTA
GATCATATTATTTTACCTGTAGGGATATATACAATCAGGCACAAATCTTAGATCTTTAAGAAGCAGTATAGCTGAACTG
CTGCTTAAATAAGTGGGAGGTTGGTTGAGGTTATTTTCCCCCTATAATTGCTTTTCTTCTGTCCCAGAAGAACCTGTCA
GACCAGTCATTAAGCTATTGTTTAGTTCTCATTTGGCTTAGGTGGTTCAGGGATCAGCTTAGGGAATAATAGAGGCAAT
GTAATGAATCTTAGTGGGAATAAAGTGATTGAGAATTTTGGTTTGTTTTTAAGGCTTAGAATATAATATCCATTCTCTA
GTTCCATGACTGCCCCAATGCAATTCTTTTTGAAATGCTGTAACTTATAGCCTGGGGAGCCTCACCATGTTCTTTTAGT
TTTTTCCTCTTCTATGTCATTGTGCACAGGATCTTCCAGCTTTTGGGTTACCATGTCTTTGAGTTTTCTAGTCTGAATA
AGATCTCTTTAGAAATCATATTTTTCTGAGAGCTATAGTTGACTATACTTTGTTTTCTGTTGTTTCATAGGATTATCTC
ACAAATCCTACGGTGAAACCATATGAGGTTCACAGTAACCATATGAGGCGTAGGTATTATCACCTCCATTTTATACAGA
CTTAAGGAAGCTAAGTAATTTGTCCCTGGTCATGTATGTGACAGAACCAGAATTTGAGTTCAGAAAGCTAACTTCACAG
TCTACACAGTTAGCCTCTCTTTATTTTTGTTTTTGTCTTTGTTTTGAGACGGAGTCTCGCTCTGTCATCCATGCTGGAG
TGCAGTGGCACCATCTTTGCTCACTGCAACCTCTGCTTCCTGGGTTCAAGTGATTCTCCCGCCTCAGCCTCCCTGATAG
CTGGGACTACAGGTGCACAGTACCATGCCTGGAGTTAGCCTCTCTTTATACAATACAGCATCTTTGAGTTNGGATTGAC
AGTTCTGTTCTTTCAAGAGACACTTTTTGAGACCTGTCATCTTTTAGGCACTGTGCTGGGTCCTATGGATAAAAAACTA
CTGAACATGATTCCTGTAACAGAGATGCTCCTAGTTTATTATAAGGACAGATGTTAGGTGCAGTGTGAAAAATAAAATG
TTAGACAAACAATCTCTTACAGTCTCGAAAATATTCAAATTCAGACTATTTTAGAGACAGCACATCCCTGAGAACAAAA
TAGTAAATAGTCAATTTATTCATTTGTTCATTCACCCAACAAAAATTCTTTTGAGTGTTTGCAATATGTTGGGTGCTAA
GCTAAGTCTTGGAGATAGAGTGGTAAAGGAAACAGATGAGGTCCTGCCCTTATAGAGCTTATTTACCTTTTAGTGAGGC
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CTGAAAGAATGCCAGAGAGACCTCAGGAGAGAGAGGCTGCGGGTGGGGGTGGAGGGTGGTAATCATGCTAATTGAAGC
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CATTTTTTATGGCTGCATAGTATTCCATGGTGTATATATAGCACATTTTCTTTATGCAGTCCACCACTGATGGACATTT
AGGTTGAGTCCATGTCTTTGCTATTGTGAATAGTGCTGTGATGAACATATGCATACATGTGTCTTTATGGTAGAATTAT
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Fig. 9.64

ACCAAACTGCTTTCCACAATGGCTGAACTAAATTACATTCTCACAAGCAGTGTGTAAGCGTTCCCTTTTATCTGCAACC
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TGCCTCTAGCTTTATTCATTTGCTGAGGATTACCTTAGCTATTCAGGCTCTTTTTTGGTTCCATATGAATTTTAAAATG
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AATTGATAGACCACTAGTAAGACTAATAAAGAAGAAAAGAGAGAAGAATCAAATAGATGCAATAAAAAATAATAAAAGG
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Fig. 9.65

ACCAAAAACAGACTCTGAAATTGAGGCAATAATTAATAGCTTAGCAACCAAAAAAAGTCCAGGACCAGATGGATTCACA
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TTATAAGCATCTGGCATTTCTCCTGCTTGCACTCACTCCATCCTGCCGCCTTGTGAAGAAGGTGCCTGCCTTTCCTTTG
CTTTCTGCCATGATTGTAAGTTTCCTGAGGCCTCCTAGGAGTGCAGAACTGTGAGTCAATGAAACTTTCTTCCTTTATA
AATTACCCAGTCTCAGATATTTCTTCATAGCTGTGTGAGAATAAACTAATACTACTGATTTCTATTTTCATTAAGCTGT

Fig. 9.66

GGTCTGAAAGTGTGGTTGGTATGATTTCCGTTTTTTTGAACTTGCTAAGAATTGTTTTATGACACATTGTGTGGTTGAT
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GTAATGGCCTGTGAACAAAATGACTTCTTTTTGTTTTGTTTTGTTTTGTTTTGATGGAGTTTTGCTCTTGTTGCCCAGG
CTGGAGAGCAATGGTGCTATCTCGGCTCACTGCAACCATAGCCTCCTGGATTCAAGTGATTCTCCTGCCTCAGCCTTCC
GAGTAGCTTGGATTACAGGTGTCCACCACCATGCCCCACTAATTTTTGTATTTTTAGTAAAGACAGGGTTTCACCATGT
TGGCCAGGCTGGTTGCAAACTATAGGCTGTCACTCTCTATGCTTTAATATTTTGGTTAATTTAAGGGCATAATTTGTG
GGGACATTGTTCTTATTTGCCATTACTTTTCATAGCAAAAACAGCAATTACTTTTGCACCAACCTAATATTTCCTTTGC
TAATCTAGTGTGACTTCGGAACAGTGATAAATAAAGGTTGGGGAAGAAAGGGCTGACTAGTAAATGCAGACAGAGTTGA
GGCAATTTCACAGTTCCATTGGCGTGTTCTATGGGCCATTTCACTTTCAGATGGTTTGTCTGGCTGAATTTAGAGGCTA

Fig. 9.67

ACCTCTGGGGTTTTGCCTTTCTTCTTGTGACCTGAGAATTTGCTGGCATGTACAAGTCAATTTTCTTAATAGCCTTTCT
TGATTAGTCTATAGCTTCTTCAGTGAGTTGATATGTCACATTTACTTATACTAAAATCTTACACTAGACATATTTTGGT
GTCTTTGGCATCAAACCTCTTTTAGTCATTTGTCTTTCTTGTCTAGAGCTAGTGTCATAATATTTTCATTGTTACAGGT
TTCTAATACACTTTAAGATCTAGAATGACATAACTCCCATTGTATCTTTCTCCTTTTATCTTTTAAGAAAAAGAATTAC
CATGGAAAATAATGCTTCTGTTTCTGTGTCGTTGTTTAAAGTATTTACAACTCTTGTTGTGAATTTTTTTCTTTTAATA
TATTCCTGAACTTTATTTATATATTTAATTAGTTATGTTTGCATTTTTAAAAAGTGAGATAGGTGTATCTTTTCAAAAA
TAATCATTGTCAGGTATGGTATTAGGTTTGTAATAGCTATTAGCTATTACATTACTTTTAATGGCAAAAACCACAAATA
GTTTTGCAACAACGTAATATAATGAATACAATAGGCTTCCATTGTTTATCTATGTTGTGGAATATAGTGTAATTCTGAA
ATAACTTACTTCTTATACAATTTTTGTTTTGCTTTTTGGTTTAGATCGACTTTTCTAAAAGTCTTTTTCTTTTGTTTC
TGCTATATATTTGTTTTCCTATGTTCCGGTTTCGATTTCTTTCTGGATCAGTTTCATCACTTCATGTTTTCTTACATTA
TTGCCACTGCATTAGTCTGTCACGTTAATCAGAATAGGATTGTATATGGTATTCTTTTGTATATTTTTAATCTTGTTTC
TATATTTGGTGAAATATACTTTGTAATTTTTAAGGAAATCTAAATTTTCTTGTCTTACTCTTGCAGAGTTCTACTTACT
TAATTGCCGTTTTTCTGCTTTGATTTTTATTAACTCATTTTTCCAGCCTTCCTTGGGGTCCTGATCTTTTTCTAGGTCA
TTAAATGAATATGTCATTCTGTTTTGTTTTTTATTGATTCGTTCCTGTGACTTTTCTTCAGGTTATTTTGTTGACCTTT
ATTGAACTTCTCCAGTTTATTGAGTTGAATATTTTGTTATTTTATTTTATTCAATTTTTAAAATGATGAGAACCCTGAA
TGCCATGTGTTTTTTTCCTTTTGAGTCCATCCTTTACCACACATCATTAGATTTTATATAGATTTTTCAGTTGTTCTTA
ACTTTAAAATAGTTTGTAATTACAATTTGGATTTATTCTTTAGCCTATGCCATTTAGAAATGTTTTATGTTAAGGTTTA
CCTTTGCGTTTTTATTTTTAAAGGTTATCTTATGATATTAATTCCACTGGATTATGTGTACGTCTTTCACATACTTATG
CATTCTTGTGGTTTATATAATTTCTATGTTTTATAGCTTTCATCTGCCTCTATCTAATATATGAACAATTTTTGATCAA
CTTTTTACAAAAGTATTTTCTTGATTTGAAGAATCCAAACTTTTAAATGTAACTGTTAGACCAACTTCATTAATTGAAT
TTACTCATATGCTTTATGGACCTTTTAATTTTCCAGCTACTTTTTCTCTTTAAGAGAGTTTTGTTAGACTTTAGTACTG
TATTTCTGTTAGTTTCTTCTTACAGTTATAACTATGTGTGTGTGTGTATGTGTGTGTATACACACATGTATATATATTT
ATACACACACATTGTAATATGTAGTGTCTTATGGGCTACAACATTTTCTTAGAGTCTATATTTTATTTGAAGCTAGAGT
TTTTTTTTTTTTTAAGTAAGAAGTTTTATTTCTTCCTGGAATCTTGCAGGATTTTTTTTTCTGTTTACTCAGTAGTTTA
AAAAGTGCCAGATATGTTAAGGTTTAGGTCTTTTACTGATTTATTTTTTTCCTGGAGCCATGTCACCCATTTTCCTGAG
ATCAGGAAAGTTTTCTTGGGATGTGTATTTGGTTATTGTTTCTGTTTTATTTCTCTGGACTCTCCTCTAGGAATACTGA
TGAGCTATATGTTAGCTCCCTAGTCTCTGTTTTTCAATTCTTTCTTCTTCTCTATTGTACTTTTATTTTCCTTTCTCCC
TGTGAAGGCTTATAGAACTGTTAAATAATGCTTAAGCCCACTGTCTTTCTTCAGTATCAATTAATTCTTCTACTTTGCT
TTTAATTTCTATGTAATCTTCCTTTAAAAAAATTCTCTCTCCCTTTTCATTTTACCCACTGTCCATTGCCTTGTTTAAC
CTACCTGGAATCCTCTTCATTTCATCCTGTTTTCTTTTCATAAAGGCCAATTTATTGGTTCTTTATTAAGGACACCAAG
TAGTCTTCTGAGTTTTTCTTTTGGATTCTGCAGTAAAAATTTTTCAGAGGTTTGTTCTGAATTTTTGGAGCACTATTCT
CTTTCCCCTGTTGTGTGTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTATAGCTCAAAACTAAAATAACTAGAGAA
TCAAATATATATATATATATTACTCAATTTTAAGTAAAGCCACAAAGATACCCAAGTTGAGTGGGTTTTTTTGGTCCAG
CTCTTTTTCTATTACAATGGTGTTGAAAACTTAATATCCAGTTTACAGTTTAATGAATATTGTTGGGTTTAGTTGCCAT
TTCAATTACCATTTTCTGTTAATTTTTATTTAAAGTATCTCCTCTCAGTTGGCTTTTGATCATTCAGCTTCTGCAGCCT
GATTCTTTGATACTATAAGAAGTTATACACGGTATCTGTAATTCTCAACCTATCAGGATTGCTCCTCTGTGCTCTGTTC
ACCTTTTCTCTCTCCATTTCTTTTTTTTTTTTTTTTTTTTTTTGAGACGGAGTCTCGCTCTGTCGCCCAGGCCGGACTG
CGGACTGCAGTGGCGCAATCTCGGCTCACTGCAAGCTCCGCTTCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCCCG
AGTAGCTGGGACTACAGGCGCCCGCCACCGCGCCCGGCTAATTTTTTGTATTTTTAGTAGAGACGGGGTTTCACCTTGT
TAACCAGGATGGTCTCGATCTCCTGACCTCATGATCCACCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAG
CCACCGCGCCCGGCCCTTCTCTCTCCATTTCATCAACCAAAGGCTCTACCTCTGCAGACTAAGCCTTTTGGAACATGTG
GCTTTACGGGCCTCTCTCCCCTACTTTCTGCTCACTTTTTTTTTCTTAAATACGCTGGAATGGTGGGAGAAAGAGCATT
TGCCTCCAAGTAAAATTCCCCAAACCAAGAACTCTGGGTCCCTTTTATCCAATAAAGAAAAGAAGGAGTGTTTGCTTTG
GCAGAACATATACTAAACTTGGAACAACACAGAGAAGATTAGCATGACCCTCACACAAGGATTACATGCAAGTTCCTGA
AGCGTTCCATATTTTCTTACGTAATAGTAAAGGGTTCGATTCAACAAGAAGAGATAACTATCCTAAATATATATGCACC
CCAATACGGGAGCACTCAGATTCATAAAGCAAATTCTTAGAGACTTACAAAGAGACAGACTCCCACACAATAATAGTAG
AAGATTTTAACACCTCACTGACAATATTAGACAGATCATTGAGACAGAAAATTAACAAAGATATTCAGAACCTGAACTC
AGCTCTGGATCAAGCAGACCTGATACATATCTACAGTATTCTCCACTAAAAACAACAGAATATACGTTCTTTTCATTGC
CATACAGCACTGACTCAAAATTAATCACATAACCGGAAGTAAAACACGCCTCGCAAATGCAAAACAACTGAAATCATAA
CAGTCTCTCAGATCACAGCACAATCAAATCAGAACTCAAGATTAAGAAATCCAGACATAGAGGCCGGGCGCGGTGGCTC
ACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGACGGGCGGATCACGAGGTCAGGAGATCGAGACCATCCTGGCTAACA
CGGTGAAACCCCGTCTCTACTAAAAATACAAAAATTATCTGGGCGTGGTGGCGCGCGCCTGTAGTCCCAGCTACACGGG
AGGCTGAGGCAGGAGAATGGCGTGAACCCGGGAGGCGGAGCTTGCAGTGAGCCGAGATCGCGCCACTGCACTCCAGCCT
GGGCGACAGAGGGAAACTCCCGTCTCAAAAAAAAAAAAAAAAAAAGAAATCCAGATATAACCACACAATTACATGGCAAT
TGAACAACCTGCTCCTGAATGACTCTTGGGTAAATAATGAAATTAAGGTAGAAATCAAGAAGTTCTTTGAAACTAATGA
GAAAAAAGAGACATCATACCAGAATCTCTGGGCCGTAGCTAAAGCGGTGTTAAGAGGGAAATTTAGGCTGGGCACGGTG
GCTCACGCCTGTAATCCCAGTACTTGGGGAGGCCTAGGTGAGCGGATCATTTGAGCTCAGGAGTTTGAGACCAGCCTGG
CCAACATGGTTAAACCCTGTCTCTACTAAAAATACAAAAAGTAGCTGGGTGTGTGGCACGCACCTGTAGTCCCAGCTAC
TTGGGAGCCTGAGGCAGGACAATCTCTTGAACCTGAGAGGCGGAGGTTGGAGTGAGCGAGATTGTGCCACTGCACTCCA
GCCTGGGTGACAGAGTGAGACCCTGTCTAAACAAAACAAAACAAAACAAAACAAAAAACCAAAATTTATAGCACTAAAT
TCCCACATCAAAAATCTGGAAAGATTTCAAATTAACAATCTAACATCACAACTAAAGGAACTAGAGAATCAAGAGCAAA

Fig. 9.68

CAAAACCCTAAGCTAGCAGAAGACAAGAATAACCAAGATCAGTGTTGAATTGAAGGGGATAGAGACACAAAAAAATCCT
TCAAAATATCAACAAATCCAGGAGCTGGTGTTTTGAAAATAATTAATAAAAGAGACTGCTAGCTAGACTAAAAAAGAAT
AAAAGAGAGAAGGATCAAATAAACACAATTAGAAATGATAAGGGGGATATCACCACTGACTCCACAGAAATTCAAATAA
CCATCAGAGAATACTTTAAACACCTCTATGTATATATATTGGAAAAACTAGAAAAAATGGGTAAATTCCTGGACACATA
CACCTTCCAAAGACTGAACCAGGAAGAAATTGAATCCCTGAACAGATCAATAACAAGGTCTGAAATTGAGACAGTAGTA
AGTAACCTACTAACCAAAAAAAGCCCTGGACTAGATGGATTAACAGCTGAATTCTACCAGAGGTACAAAGAAGAGCTGG
TACTATTTCTGCTGAAACTATTCCAAAAAAAAGGAGGGACTCCTCCCTAACTCATTCTATGAGGCCAGCATCATCCTGA
TACCAAAACCTGGCAGAGATATAACAAAAAAAGAAAACTTCAGGCCAATATCCTTGATGATCATTGATGCAAAAGTCCT
CAATAAAATACTGACAAAACAAATCCAGCAGCACATCAAAAAGCTTATCCACCATGATCAAGTTGGCTTCATCTCTGGG
ATGCAAGGTTGTATCAACATATGCAAATCAATAAATATTATTCATCCTATAAAAAAAACTAAAGACAAAAACCACATCA
TTATCTCAATAGATGCAGAAAAGGCCTTTGATAAAGTTCAACATCCACTCATGTTAAAAACTCTCAATAAACTAGATAT
TGAATGAACATACCTCAAAATAATAAGAGCCATATATGACAAATCTACAGCCAATATCATACTGAATAGGCACAAAACA
AGGATGCCCTCTCTCACCACTCCTATTCAACATAGTATTGGAAGTTCTGGCCAGGGCAATCAGGTGAGAGATAGAAATA
AAGGGTATTCAAATAGGAAGAGAGGAAGTCCAGTTATCTTTGTTTGCAGATGATATGATCCTATATCTAGAAAACAGAT
AGTTTCAGCCCAAAAGCTTCTTAATCTGATAAGCAACTTCAGCAGTCAGGATACAAAATCAATTTGCAAAAGTTGCTGG
TATTCCTGTACACCAACAGCAGGCAAGCAGAGAGCCAAATCATGAATGAACTCCCATTCACAATTACTACAGAAAGAAT
AAAATACCTAGGAATACAGCTAGCAAGGGAAGTGAAGGACCTCTTCAAGGAGAACTACAAACCAATGCTCAAAGAAATC
AGACATAACACGAATGGAACAACATTTCATGCTCATGGATGGGAAGAATCAATATTGTGAAAATGGTCATGCTGCCTAA
AGTAATTTATATATTCATGCTATTCCCATTAAATTACCATTGACATTCTTCACAGAATTAGAAGAAACTATTTTAAAAT
TCGTATGGAACCAAAAAAGAGCCCAAATTGCCAAGACAAGCCTAAGCAAAAAGAGTAAAGCTGGAGGCATCATGCTACC
TGACTTCAAAATATACTACAAGGCTACAGTAGCCAAAACAGCATGGTATTGGTATAAGAACAGACACAGAAGGCTGGGC
GCATTGGCTCACGCCTGTAACCCCAGCATTTTGGGAGGCCTAGGCAGGCAGATCATGAGGTCAGGAGTTTGAGACCACC
CTGACCAACATGGAGAAACCCCATGTCTACTAAAAATACAAAAATTAGCCAGGTGTGGTGGCATGCACCTGTAATCCCA
GGTACTCAGGAGGCTGAGCCAGAAGAATTGCTTGAACCTGGGAGGTGGAGGTTGCAGAGCTGAGATCGTGCCACTGCAC
TCCAGCCTGGGCAACAGAGTGAGACTCCATCTCAAAAAGAAAAAGAAAAAAAAAAAGAACAGATACATAGCCCAATGGA
AGAGAATAGAGAACTCAGAAATAATACCACACACCTCCAACATCTGATCTTTGACAAATCTAACAGAAACAAGCAATGG
GGAAAGCATTCCATACTTAATAAATGGTGGTGGGAGAACGGGCTAGCCATATGCAGAAAATTGAAATTCGGCCCCTTCC
TTACACCATATACAAAAATTAACTCAAGATGAATTAAAAACTTAAATGTAAAACCCAAAACCATAAAAACCCTAGAAGA
AAATCTAGGCATTACCATTCAGGACATAGGTACAGGCAAAGATTTCATGATGAAAATGCCAAAAGCAATTGCAACAAAA
GCAGAAATTGACAAATGGGATCTAATTAAACTAAAGAGCCCCTGCACAGCAAAAAAAAACTATCATCAGAGTGAACAGA
CAGCTTACAGAATGGGAGAAAATTTTTGCAATCTGTCCATCTGACAAAAGTCTAGTATCCAGAGTCTACAAGGAACTTA
AACACATTTACAAGAAATAAACCAATGGCCCAATTAAAAAGTGGGCAAATGACATGAACAGACACTTTGCAAAAGAAAA
CATTCATGCAGCCAACAAGCATCTGAAAAAAAGCTCAGCATCACGTCATTAGAGAAATGCAAATCAAAACCACAATGAG
ATACTATCTCACACCAGTCAGGACAGCTGTGATTAAGAATAAAAAAAACAACAGATACTGGTAAAGTTGTAGAGAAAAA
GGAATGCTTTTACACTGTTGGTGGGAGTGTAAATTGGTTCAACTGTTTTGGGAGACAGTGTGGCGATTCCTCAAAGACC
TTGAGGCAGAAATACCATTTGAGCCAGATCCCATTACTGGCTATATACCCAAAGGAATATAAATCATTCTATTATAAAG
ATACATACATGTGTATGTTCATCACAGCACTATTTACAAAAGCAAAGACATGGAATCAACTTAAATGCCCACCAATGAT
AGACTGGATAAAGAAAATATGGAACATATACACCATGGAATGCTATGCAGCCATAAAAAAGGATGAGTTCATGTCCTTT
GCAGGGACATGGTTGGAGTTGGAAGCCACTGTCCTCAGCAAACTAATGCAGGAACGGAAAACCAAACACCACAGGTTCT
TACTTATAAGTGGGAGCTGTATGATGAGAACACATGGGCACATGGGGGAACAACACACACTGGGGCCTGTGGGGGTGGG
GTGGCTTGTGGAGAGGGAGAGTATCAGGAATAATAGGTAATGTATACTGGGCTTAATACCTAGGTGGTGGGATGATCTG
TGCAGCAACCACCATGGCACATGTTTACCTGTGTAACAAACCTGCACATCCTGCACATGTACCCTTGAACTTAAAAGTT
GAAGGAAAAAACAAAAGAAGGATATGTTCTTAGTTTTCTATACCTATGAGCCAGTCAATTGGAAGTGAAAGCTGGGTAT
GCCAAGGAATAACTAAATTCCCTTTACGGTTTCAAAGTTAGAACCTATTTTTCTCTTAAGATTATGGAATTGATTATCC
ATTACTTTTGGTTTTAAAGGCTGTCTTCAATGGTTTTAGTGACAAGTTGGTCACAGCAGCATTACATGATTTTAGCCAG
AAGCTATTTTGAACCTAAAATTCCTATCAGAAGGTTGAAAAAAAACCTAATTTTACTTTTATTTAGAGCTTGTGTGCTA
ATTATTTGATTTTTAAATTTCCGACTCCACTTGGAATGAAGACACAATCCAGTAGTTAATATTAAAGTATGAACTTTCA
ATTGTTTCCTTTCTTCCTTTTTTTTTGAGATAAGAATCCCTCAAAAGAATAAGTGAAACAGAGACTTCAAAGTTCCGTGG
TGACTGTTGAAATATAACAGAATCGCACTGTGTTTGAATTTACTGTGATATATTTCTAATGTCTTATATTTGGTATGTT
TCTCTTGTTGTTATTGCTGACACAAACCAAAGAACAAGAATTTCTTTTATGCCACTGATTTGCAAAGGTCGTATAGAAA
ATGAAGGGTCAGATAATGGATGTTAATCATCCTCATTGATGGATACATTGACAGGAAAACATAATTGAATTGCACATAT
TAGTGGAAGATAAAAAAACCATTTCACAAATCGTTCTTAGTAGAGAAAAAAATGATAGGAGAGCTAAAATTGATGTGAAA
AACACAGAAGGAAGTTAAGGGATTAGAGTGGGAGGGAAATTAGTGAATATCTATTTGTGTGCATGATTGCATTTTTGAA
ATAATTAGTTGCCTAATTTGTGTATCCAAATATAGTAATTGTTTTTCCATAGTCATGACTTAAATATTCTCTGTGTGTA
ATTTTCAGTTGCATACATTTTTTTGCAGAATCAAATTGCAGAGGAATACATTCATTTGAAATTTCTCTAGGGATGTGTT
TATAACCCATTTTGGAAAGAGTAGAAAGATTTTTTTTCTCTTCCAAATGGCTATGAAGGTGGATAACTTCTCTGATCTT
TTAGTAAACACTTTTATGTTAGTTGAATGGTATGCAGTTAGTCATAAACAGGAGAGATTGAGGAAAAATAACATGCTTA
ATGCAAATAAATTTTCTGTACCTGATAAGTTAATTGGAATTTTTTCCTGTAATCTTTTTTTTTTTTATTTTTCTGGTAG
ATGCTTGTTGATTTAAGGTAAGATAGAAAAGAATCATCAAACTATATGTAAACCACAGCCAAATGATGAATTCATAGTT
TTTGCTCAAGTAGAGGGATTATCTGAAAGTACAAAAAGAATTTGATAATTGAGAAATACATTATTTTGAATGCACATTT
GAAGTAGCTAAAAATTCTACGCCACAGCTGAATGCACTGGCAGTTTGTTAATCACATCCATAAACATGAGTCTTCTACA

Fig. 9.69

ATTGGAGTGGGCCCCACACTTGGAACATCTTGAAGATGTTTCTTCTTTGGCTGTGCTAAATTAAGCATGCAAAGAAGTT
ATATTGTGTTAACATTTCCACAATGAAATCTTATTGGCACTTCCTGTATAAGTGGCTGGGAATAGAAATTCTCATTTAT
GAATCAAAACACTTTGCCTTTTTATTTGGAGGTCAACCTACTAACCTTTGGTTATAGGATAATACCAGCAATTTTATTA
TAAAGTGTATTTCAGTAATTGGAACTGTGTTTTGATTATACAATTGGATAGAATGTATAATAAAATGAAATGAAAGAAA
TTTCTCCCAGAAGATTGAGTTAAAAATGTTTTGGTGATGAAATTGAGATGATGTCCAGATTTATAGCATGTTTGGTAAC
CATAACATACTTCTCGATATATTGAATTCCATGTAAATGCTTATTTCTTCAAACCCTTTAAATTTCAGAGTATTTTCTC
CCTTCTGTTATTAATCAGTTCTATTCATAGTGGATCTTAGAAAATTATCCAGTGATTAATATTTCTCCATATTTGTAGC
TTTCATTACTTTATATTTCTGTTTTTGCCTAGGCTCCTTGTTACCAGCCTGTTCTAATGTCACAAAACTTGGCAAACCC
TACCCAAGAAGGGTAAGGTTTAGTATCTATGAATTTTGAAAATACTTGATGAGAAAAGTTGCTTTTAAATTATTTTGAA
TCTTATTAATACCAAAAATATTTGAAAAAGAGAAGCAGGTACATTTTTCCAATATTCAAATTTCATTCAATGTATAAAT
ACTCAAACCTTTTTTTATAAATTATACTTTAAGTTCTGGGATACATGGGCAGAACGTGCAGGCTTGTTACATAGGTATA
CATGTGCCATGGTGGTTTGCTGCACCCATCAACCCATCATCTACATTAGGTATTTCTCCTAATGCCATCCCTCCCCTTG
CCCCCCACCTCCCGACAGGCCCTGGTGTGTGATGTTCCCCTCCCTGTGCCCATATGTTCTCACTGTTCAACTCCCACTT
ATGAGTGAGAACATGTGGTGTTTGGTTTTCTGTTCCTGTATTAGTTTGCTGAGAATGATGGTTTCCAGCTTCATCCATG
TCCCTGCAAAGGACATGAACTCATTCTTTTTTATGGTGGCGTAGTATTCCATGGTATATGTGCCACATTTTCTTTATCC
AGTCTAATATTGATGGGCATTTGGGTTGGTTCTAAATCTTTGCTGTTGTGAAAAGTGCTGCAATAAACATATACGTGCA
TGTGTCTTTTGCAATAGCATGAGGGAAGGAGATTGGAAAACATTGACTCATTGTACAATTTAAATACGCCAACTTTGTC
AACTTTTATTACAACTGGAAAGCACTTATGGTACTTATTAGAAAGAAAGTGTGTGTGGATACGTATGTGTGTAAAAATA
TGGCTCTTCTTAAAAGGAGGCTTACCCAGTCATTTTTTTTTGAATAATAGCTGCATTGGAGGTAAGAAGGTACCTCAAG
ACATTTTCTCTAATTGTGCAGGAAAAAACAAATAAAGGAGATGAAGACTAGGCTGCTGTCATTCTGTGCCATCTCTGAC
ATCTATGGAAAGCCTAGAGGCCCAAGAATACTTCCTCCCCAGGGTGCTATTGCAGTATCTTCAGGGTCCTGAGTCTGAA
TGTTCCTATTTTATGTAAGCATTGTACCCAGAAGAATGGGTCAGAACCTCTCCTATGGTCTGAATGTTTGTGTCCCTCC
AAAATTCATATGTTGAAGTCCTCACCTCCAAGGTGATTGTATTAGGAGTTGAGGCCTCTAGGGGGTGTTTAGGTGATCC
TCATGAATAGGACTGGTGCTCTTATAAAAGAGGCCCTAGGGATCTCCGTTAACTCTTCCACCATGTGAGGACACCGTGA
GAAGGTGCCATCTATGATGAAGCTGGCCCTTATTAGACATCAAATTCTCTGGTTCCTTGATCTTGGACTTCCCAGTCTA
CAGAATGTGAGAAATAAATTACTGTTGTTTATAAGCCATTGTGTTTGTGGCATTTTGTTTATGGCAGCCCAGGTGGACT
AAGACAGCCTTTTAATAGGCAAGGGGATCTAAAGACATAGGTGAACCAAGCAAGTCAGTCTGCAGCTCAGAAAACTCAA
GTCCCCATTCAGGCAGCTGCCTGATGATGTTAGCTGTAATCTCCTGTGTTTGTGCCTGACTTGCTGCCTCAGTTTAGCT
CAGTGGTTCTCAACTGGGGGCAACTTTGACCATAGGGACATTAGGCAACGTCTGGAGACATTGTCACAGCTAGAGGAAG
GGTGCTACTGCCATCTAGTTGGTAGAAGCCAGGGTTGCTGCTAAACATCCTGCAGTGCACGGGACAGCACCTCCTCCCA
TCCCAGCAAGGAGTCATCTGTAGGAATATTTGATAAAAGCCATCTACATAAAAGCCCAACAGCTCACATCATAATTAAA
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CGTATGACATAAACAGATACTTAAATAACCATAAGGAATAGCTTCCATAAAGGGGACTTGAACCAATAAGTGAGTTTAG
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ATTTCATTTCTTATAATGCCAGAAAATAGAAAATACTTAGTAGCAAATTTAATGAAATATGTGCACAATTCTTATACTG
AAAACTATAATTTACCAAGATAAATTTAAGAAGACTTCAATAAATGGAGAGATATACTTTGCTCATTGATCAGAAGACT
CAATAACAATTTAGGATATTAATTTTTCCTGAATTAATCTATATATTCAAATTTATCTTAATCTTCATCACAATGGCTT
TTATTTTATAGGAATTGACAAGCTTATTCTAAAATTTATATGGGAGAGTAAAGAAGGTAGAATAGTCAGAATAATCTTG
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TGAGGTTTTGACATAAGGATAGACAAATAAATGAAGGAAATAAAAGAGTCCAGAAATAGACACACATTTATAAAGTAAA
TTGATTTTTTTCAAGACACCAAAGCAATTAAATAAAGGAATGGAGAGGCTTATTTATAAATGAAATTGGAATAAATTGA
TATCCATATGGGAAAAAAAATAAATTTTCACTCCCTAAATTCACACCTCAGACAAAAATCAATTCAAGATGGATTGGAGA
CCTAAAAGCAAAGGTAAAACTCTGATACTTCAAGAACAGAACATGACAGGATTCAGAAAATTATAACCCTCAAAATTGG
TAAATTAGACTGCTCATCAAAAGACATACGTAAATGAGTAAGAGAGCCACTAACAGGACAAAAATATTTGTAAAACATA
TCTGACAAAGGACTTTAATCAATATCACATAAAGCACATCTACATTAATAAGATAAAGACCAAAGAAAATAGCTCAATA
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AAAGGTTGAAAACACCAAATACTGGTGAGGAGTTAGAACCACTGAACTCTTACACTTGTTGATAGGAAAATTAAATGTT
GTAACTACTTTGAAAAATGTTTTGCAGATAATAAAATGTTACTTTCACCTACCCTTTGACCTAGCAATTCCACTCCTAT
TGTTTACCCAGAAGCAAATTTTATGTTACACATAAAAAATTATATCATACATAAATACTTGTTAAAATATTCATAAACC
CACATATTCATAAACCCACATATTAATCAAAAGAGAATCAATAAACAAATTTTGTCACAGTTATACAATGGAGTATTAC
TCCGCAACAAAAATGAATGAACTACTGATACCTGCAACAAAATGAGTGACTCTCACAGACAAAATGCTGAGTCAAGGAA
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AAAGGTTAGCCTCTGAAAGGGAAGACTGACCAGAGAGATGAGAGAACTTTCTAGGGAGATGGAAATGTTCTGTATCATA
AGGATGTGGGTTACATCTTTTTTTTGTTTGTTTGTTTGTTTTGAGACAGAGTCTCGCTCTGTTACCCAGGCTGGAGTGC
AGTGGCGCCGTCTCTGCTCACTGCAACCTCCGCCTCTCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCGAGTAGCTG
GGACTATAGGCGTGTGCCACCATGCTAGGCGAATTTTTTGTATTTTTAGTAGAGATGGGGTTTCACCGTGTTAGCCAGG
ATGGTCTTGATCTCCTGACCTTGTGATCGCCTCCCAAAATGCTGGGATTACAGGCATGAGTGCCCGGCCGCGTTACATC
TTTTTAAGTATTTTAAGTAAATTGGTAGTCAGTGTTCAGGAATCCTTCTAATGACTCTTCAACAGGGGTGGCTTATGAA
ATAGTTCATCAATTTTTTTTTCTGATAAGGGGAGGTTGAGGCAGGAGGATTGCTTGAACTTGGGGGGGCAGAGGTTTCA

Fig. 9.70

GTGAGCCGAGATCATAACACTTCACTCTAGCGTGGGTGAAAGAGTGAAACTGTCTCAAAAAAAAAAGGGGGGAATTTAC
ACTCTTGAAAATAAATATTTCATAAGGAAACTTTAGAGTTCTCCAATATACATGATCAAACAAGGACCTGTTACCATTT
TGGACCATGTCATAATAGAGAGGAGATAGTTCAAAATTAGTCATATGTTCCAACAACAACATGATTATGGAAACTAGTC
TTAGAATTGAGAGTAATTGAAGTTTTTGTTTTTACTGGTATTAATAAATGGTATTACTCAATTCGTTGACAGTACCAGT
CTCTGCAATATCTTTTGTTGGGGAAGGGGGAGAGGACCTGTTCGTCTAATTAGAAACACATCTACATTTTAAGAATAAA
ATATTTTACATATACTTTTTGTTATTAAATCTGCAAACTCTAGAATTGGAAGAAATAGCCTTCATAACTCTTCACTGCA
AAAGTTATGAATGTTTGATAGAATTAATTAAAGCATTCAGTAGAATTAGACTTGTTTGGAAGGACTGTAGGATCTTTGG
CAAGAAGTGTGTTTTATATTGTTTCAGATGTATACCATTTCTCTTAAGGTTTACAAGTTAATCAATAAAGATTCTTGG
CAGAGCTAAGTACAAAAGAACAATATGTATTTCGCATACCAAATGGATCTAAGTCTTAAGTGTTATTTGATGTCTCGAA
ATGTTTGGCTTTCAACTTTGTTTAAATGAATAGTGTGTATACAGTGAAGACAGGCTTTACTTAGCCATGCCTAGACCCT
CTGTGGATTCTCTCATAATCCTCAGTTATTGTAAACCATACTTAGTGAGACCAAAAGGATATTTTGTTTTGGCTGCATG
GTATTATTGGAAAACGGTAAAAATTTTATTCTTTAAATAATGTGTTTTTCTATTCAGAAAAATAATGTCTATAGAGATA
GTTATTTCAAAATGTAGTTTTCAATATGCACTTGTGGGTATGAACATGAACAAACACATGCAGACACACAGAGTCTGAC
GTTATATCTAGAATGTTGAATCCTACTTTTCTACTTAACAGGAATGTTTCCCTATGTAACGAAAAAGTCTGTATAATGT
GTCTCTATTATGTGTATTATATGAATTATATATCCTAATTTACTTAACCATTCTTTTATTGTATTGGTCATTTTCCCAT
ATTGCATACAAATTATTAGGGAACATCTGTGTGCAAACATTTTTATTTACATTTTGGATTATTTACTTAGAATAGATTC
CCGGAAGTGAAACTACCAGGTCAAAGGCTTTTCCCAATTTATTTTTCAAAAAGAAATTCCCACTGTATTCTATACAAGT
ATGCTTGTCTCACTGCCCAGTTGCTAGCCTTACATGGTTTTTTTTTAATTTTGTTTTTTATAAATAGAATCTCATTGT
TTTAGTTTGTATCTTTTGGATTACTAGTGAGTTTGAAATTTAAAAACCTGTCTTTTCAGGCCTTTGTCTTTTAGGGTTT
TTAGGATTTTCTTAACGATTAGCATCATCTCTTCTCTAAAAACGTTATATTTGTTCGTTATATTGTAATAGGTTTTTTT
TTGCTTTTAGCTATTAAGCTTTTAATTATATACTTGATTTTTAATTTAGAAAAGTAAAATTTTCTTCAATGGAGTTCTT
TTTTAAATTGAATTCTTTGACATTTTTATTATTTTGTTCAAAGAACCCTATGGGCAAGTGGAATCTTACACTTTTATTA
CCTGGATAGCGGATAACATTCATAGTTTGATATTTAATCTGTAGCATATAGTTGACTTTTATTTTTGGAATATCCTTGC
TTTAAAACTACAACTAAAGGAAGGCAGATGGTTAGCTTGTTTTCTCATTTCCTGAAAATGTCCAAGATTGGAACCAATA
TTATCAGTCTGTAATGGAGGTTGGCAATGTCAAGATGGTTTGTATCCATGTCAAGATGTTGAATCAGTGTCCAGGTCAT
TGCTCATTAAAGATGTTGCTCTTTGGATAAACAGGAAACCCAGAAAAAAGATTCTAACAATTTTTGATGCTACCTCACA
TTCCTTCGAGACAGTGCAGAACATTTCGTTCTTTAGAAAATATTCAGGTCTCTTTCTTTGTGTTACAGCACTTACTATT
TGTCTATTTGTATTATTGGCTTGTGACCCTTTTTTGGGGGGTTACAAATACACTAGGGGAAAGAGTATTTTTAAAAATC
ATTATGCCTTTGCTTTATCTATGTCTGTATACTCTCCTATTTGTTATTATTATTTTTATTTTTGAGACAGGGTCTCACT
CTGATTGCCTAGGCTGCAGTGCAGTGGTGCAATCACAGCTCACTGCAGCCTCCATTTCCCCAAGCTCAGGTGATTCTCC
CACCTCAGCCTCCTGAGTAGCTGGGACCACAGGTGTGCGCCACCATGCACAGCTAACTTTTTGTATTTTTAGTGGAAAT
GGGATTTCACTATGTTGCCCAGGCTGGTCTCAAACTCCTAAGCTCAAGCAATCTGCCCACCTCGGCCTCCTAAAGTGCT
TGGATTACAGGTGTGAGCCACCACTCCCTGCCTCCTATGTATTATTCTATATGTATTTTTTCATATTAATGTATAAGTT
TTTTCAAGTATGGGTTATTCCATTTGAACAAACCATTAATTCTCTGCTCGTCTATAGTCATTTCTTATTAGATGTGTCA
GTTCTTAATTTTATCACACATTAATTTCTTTTTTTGTTCCTTATACATTTTGTTTCCTTGAGATCTTCAGAATGTAAAT
CAATCTCCATTCTGTTATGATTTATAATCATTTACTTCTCAGATGATTCCTCCTTTAGTGCTTTGTGCCTTCTGTTATA
TTCTTATTACTTTTGATCTTTTATTGTTCTAATTTCACCTCTTCTCAACCCATCCCCACACTGGCAACTGTTATATGAA
TGGCTGGTCAGATGGAATCCACATATGTTCCGTATGCATGTATAGATTTTACTCAAGCCACTAGTGGAGACACTATTCC
TACTTACACATATGAGTACCAACCTCTCTGTGATGCAGCAATCATATCTTGACATATCTAGAAAGTTTCATCCTCATCC
ATAAATTACTTCATCTTTCTCCAAATAACTCAGGGAATTTTACATTAACCTACCCAATTTAACAATTTAGGAAAAATCA
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ATTGTCTACTGTTAATTTGCATTTTAACTGAGCTTTAAACATTTAACCAGAGGATGGTCCAATCGGAGATTCTATAACC
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AGTTGATAACCTTCAAAACAGACTCTTTACTTTGGGGCTGTGATGAGAGAAACAGAACAGAAGTTAGGAATGGTGAAAT
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CCAGTTAGGGCAAAATGTCATGCTTATTTTGAGCTCCTATAGATACATTTAAATCAGACATACTGGACTTTGCATTCTG
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GCAGTTTAGTTTATTATGAAAATTAGCAATCTATAAGATGATTCTGAAAAATGAATTCTCAGAAATTTAAGGTACACAC
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TATGGTCATCATGTCAAGAACAAAATCAATTTGATGCGATTGAAAATAACAAAAATGCTTTATGTCTTTTAGAGAAAAT
ATAAATGATTCATTGTAAATGAGAAACCTCAAACTGAAAGCACATAAAATACCAGGTATGAGTGTTGCATTTTGAAGTC
TCTGACTACATGAGAGTTGTCTGTGAAATAAAATATCCAGTTACACAAAATATTCTTTATAGTTAAAAAACTTTTTTTC
ATACATATCACTAGTTAACTATTTTTAGTCCCATCTTTCCTATGTGCCCAGCAGTGAGCTAAAAGCTGTGCATTTAATG
CATTCTTCATTGTATTTTTGTTTTGTTTTATTTTGTTATTTGTAAAGATGGGAAAGACCAAATGAAAAGATGTCAAACT
TTTCTGGGGGTGGAGAGGACATTTGCATTTTGAATTTAGAAACCTAAATTAGAGGTTTAGGAAGACTCATAAATATGTA
GCAGAGGTTTGGTGGTCACAGCTAGAAGCTGACCACCACCATGGGGCAAATAATGATTTAACCTCCTCCTGTAAGTATT

Fig. 9.71

TGATGTAAGATCATCGGTATATTTCATCTGTGACATTATCCAAGAAGAAGATGAATCTGAGGGAAACAATGCTTGCAGA
TTTGAGGGGGAAAAATGCTTGGAGTAGTTAGTCTCGGGATAGCCCTAGGTGATGATAATCCTTGCACAAACACAGCACA
CTGTTAGAACAGACAAAAGTCTGCAGAGGTTAAGAAGACCCTTGTTACATTGGAATCTTTCAATCACTTCTAGAAATAT
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ACAAATGTACACAAATAGCAATAATCAAATAAAATATTAGGGGATTGTGTCAAATGAGAGCTAGTGACAACTGTTGATT
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GCCTGAAGGGGGCGCCTCTCCTACACAGCAATACGAGGGTGGAGTTTATTTCATGGCACCTCAACCCATCTGACAGCT
AGGGGAGCTGCATTTTCCAACAGAAGGTGCATTTTGTATATTTGTAGGCTGTTTTATACACTGCTTTGTGCTGAAGTTA
TTCAGGCATTTCTCTTCCCTCTAGACCTTAAGTTCATGGAGGCCACAAGCTAGGTTTTACCATTTTTGTATCCGTCTGT
GCTGTCTAGAGTAGTGCCTTGGACACACAGTAAGGATTAAAGACTTTCGGAATATAATTAAATTTTGCTTTTACTGGGA
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CAGAGGCCAACAGTAGTTAATACTGTGTTGAAGCCATACCTTTCATACTTGATGTTATTTTTGAACAATGAAAACTTTG
CAGGAAGTTCTCATCCCTTTGTGGCTAAGATATTTTCCATTAAGGGGGAAACAAAAAGAGAAACATTAGCAAGCTACTC
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ATCTGACAGTAAGTCAATATTCTGAGATTGTTTCGGAGGCTTCTTATTTTTCCTCAGCTGTAAACTGAATTACCTTTTA
AACGATTTTCTAGCTAACAGTAAATGGTCCATAAAACATATGAATAAAAATGAAGGCAAACATTTCATGCTTAAATAGC
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GAGGATAGCTATGCCTGAATTCATGGTGACGGTAAAGAGAACGTGTAGTGTTAAACGGGCGTCCTGTTTGCCTGAAGTT
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ACTCCCAAACAGATTCGTTGTTTTTCTTCCCTGTAATTTTTTATTTATATCTGTGTGTTTTGATTAAGGTTACTTTCTA
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GCTCAATAAGCAACAGCCGAATCCTTATTCTACATATTTTTCAGCAGAGTGCCTTATCAGACACTATGTCCTCTCTAAA
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TGTAGAATTAGATGTAGGTGAGCCAATCATAAAAGATTGGAGGAAATGTGAATGATTCTTAGATTGCTTCTCAAGTGC
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GTTGCCATTTATAAAGAATACTTGAGGTATTATTTCTGAAGATTCTTGACTTTAATATATTCATTTAACAAACTGGCCA
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CCTAAACTTTTAGCTAAAAGCAGATAACACACTTCTTTTTCATATAATGCATTTGTATCTGAATTAGGACTTTAGTGTT
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CCTGGGAGTTTCCACACCTAGCTAGGAGATTGTCTCAGGGACTTTTTACCCAGAAGATAACTCTATTATTGGTAGGCTT
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GTAATAGAAACATTAATAGCTCTCTATACTACCAGGCATAGTTACCTAAAACAAGGTGAGTGCTAAATAGGTGTAAAAA
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TGCAGTTTTACCATATCAATTAGTTGGATCTTGTCTCATCTTTCCGTTCACTGTGCTACCTAGTGTGGATGATTCTGCG
TATTTTAATGTTGAGATGTGACCACACTGTATTCATTCAGCTGGTTTCTCAGAACTCGCTGAATATGGGACAGTTTTTT
TTTTTCCCAGTAGTGAGCTTGACTCTGTGCATAGGAAATACACGCAGTCCTCATGTGCCTTTCCCTTTTCTGCAGATGG
TAGTTCATGAGCCTCCCTCAAATATAACAGCAGCTCATAGGTGAATTTATCAAAGAGTATGGCCACCTTGGGAGACCTG
GCACATTTTACAGGCCCTGCTGTGATATAGAACAATCAACTCAATTTTTTATGTGTTCTTTCCATTATTGTAACTCCC
ATGAGGTAAAGTGTTAAGCTACATTAAGCCTCATTAAGAGAAATTTGAGTTCATGATGCATATGTAACTTCGCAGTAAT
TGTAATTAGTACAATCTGCTTCTTGAATTTGCTAACATATTTGGGAAAAATGTTACCATTTTTATTTCTTTTAAAACA
TTTAATGCCAAAAACTTTTCAGTAGAGCATTTAGTACCTCTCACAAAATTCATAAGTGGCTTTGATTGTGTGCAGAAT

Fig. 9.72

TACATCAAATGATTAGGAGCAGACAGTTCATGAAACTAAGAACATAATTTACAACATTTGTAACAAAAAAGTATACTTT
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CTCTGTGTAGATACTAATGAACCTGAGGGTATAAGATGGAGATAATATTAGAAAACATGGTAATATAGTACATACTGCT
CATAATTATAGTCAGAAATTTTACCACCCCTCTCAGTAATTGGTAGAGTAAGTAGACAGAAAATCAGTAAAGATATAGA
AACTTGAAAAAACAATCAAATAACTGCATCAACATTTTAGAACACTCCACCCAACAACAGCAGAATATACATTCTTTTC
AAATGTGCATGAAATATTTACCAGTATAAAGTATATTTTAGACCATAAAATATATCTCAGTACATTTAAAAAGATTTCG
GACTATGTTCTCAAACTACAGTGGAATTAAGTTATAAATCAGTAGCAGAAAGATGCCTGGGAAGTCCCCAGATATCTGG
ACACTAAATATCATGCTTCCAAATAACTCATATGTAGTGGATTGAACTGCAGCCTCCAAAAGCATATGCCTATGTCTTA
ACCCTTGGAACCTGTCAATATGAACTTAGTTGGGAAACTGATCTTTGAAGAAGTAATTAAGTTGAGGATCTCCAAATGG
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CCTGTTGGCCAGTCTGGAGTGCAGTGCTACAATCACAGCTCACTGTAGACTCAACCTCCCAGACTCAAGTGATCCTCCC
ACCTCAGCCTCCTGGGTAGCTGGGACTACAGGCATGCATCAACAGGACTGGCTAATTTTGTACGTTTTTGTAGAGACAG
GGTTTTGCTCTTGCCCAGGCTGGTCTCAAATTCCTGTGCTCAAGCCATCTGCCTGCCTCAGGGAGGCAATCCCAAAGTG
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TGTTTTGGTTTCCTTGGAGGTTAATATTTCCTACTGAAATAGGGAAATCTGAAGGAAGAGCAAATTTCCACAGGAACGA
CAAGAAGTTTGATTTTGGATTTGTGTGGTTTTGAGGTACTTTCTTGTACGTTTGGAGAAAGTATCTAACAGGGAATTCT
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TGCTTAGCTCTCACAATGATGCTATTTACTGATGAAGAGTTAAGTAACTTCTCAAGGCCCATGATGCATCCTGTTTTCA
GGCATCAGGTGCTGAGGGTTTGTTCCAGCAGCCTCTGACATCTGGTTATATGAACCTGAGGCCACGAAGTGTAGCTCTC
CCTGCCTCAGATTATATCTATAACTTTGGCTTGTACTTGTTCCTGGTTTGTTTCTTACTCTCTTGTTTTATTTAAGCTA
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CCTATTAAAGAATTGAGACTTCCAGGAAGATGGAGTATACATAGCTTTCCCTATTCCTCCTGCTAAATACAACTAAAAA
TCTTGGATATTTTATATATATGTGTGTATATATATTTATATATATATATGTATGTATATAGAGGAATACTCTGAAATAT
GGAGAGAAGGCAGAAGGCAGACTAGCTTGGGGCCTTGGGACCAAAAGAAAAACATATTAATTGCTGTGTCACATGAGTT
TCAATCAATTTAGATTCCTTACTCTAGGAATGATAATGACTTACTTGTTGCATATGTTGAGTAATGTTGTTTAAAACGA
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GGAGTGCCCTGGGTTTTCTTTTTTTCTCATATATACCAGACTTGGAGCTTAAGAAATCAACAACATGGGCTGAGTGTGG
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CCAATATAGTGAAACCCCATCTCTACTAAAAACACAAAAAATTAGCCAGGCATCGTGGCAGTGTCTGTAGTCCCAGCTA
CTCAGGAGGCTGAGGCAGAACCATGTGAACCCGGGAGGTCGAGGATGCAGTGAGCCCAGATCATGCCATTACACTCCAG
CCCAGGGGATAGTGTGAGACTCTGTCTCAAGAAAAAAAAAAAAAAAAGAAATCAACAACACAAAAATACCAATGCATTAC
ATGGTAAGCAAAAACATTCTTAACAAAAGCATGCTTTCTATAATTAAAGGACCAGAGAGGGTCAACCTAACAAGACAAA
ACTTTTAGATAATAACCACCATATTCCAGGTAAATAACAGAAAAAGCATTGTGGACCCAGTCACATCTATACCTGCAAA
AGCCATGTCGGGAGCTTAGGTTTTTACTTTTTTGAGATTCTGATGAAGTACCCCAATGTCCACACTGGGATAGTGTCAG
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AATTCTGGACTTCCAAAGCCATCTGGAAGTAATAGGGTGCTCTTTCTTCTCCTGACTGGGCTGGTGTCCGTGGAGGCCT
AGACAATATTCAGGACCTTCACCACTGCCCTATGATAACAAGGCCACCCTCATTACAGTGTTCCAACTGGGAGTTGGAA
CTCCTAGAATTCTCACCTTCACCCAGCAGTAATAAGGAGCCTCTTCCTAAGATGCTGAATGGGGAATCTGGGCTTTGCA
TCCATGTGGAAATCATGAGGCAGTACCACCTGCCCCTTCACCTGCCAGAGAAGTGTCAGAGAAAGCCAATTAAAACAGA
AGATTTAAATAAGAAATGGCATCTCTTAACATAATTTAAAAATGAACAGGTTTTAATAAATTATTCTTATACCAAGAAC
TAGATCTCAAAATGAAGGAAAATTGCAATTAATAGATACCAACACTGAGATGACAGAGGTGTTAGAGTTATTTGACAAC
AGTTTTAAAATAGTCATGATAAAAACGCTTCAATGAGCAAATCTGAACACCTTTAGAATGAATGAAAAAGTAGAGAACC
TGAACAAGGAAAGAGAAGCCCTCAGCAAAGAAATAAAAGAGAAAAAGATGAGCCACGTGGAGTTTTAGAACTGAAAAAT
ACAATAACTAAAAGAAAAAGCTTAGTGGATGGGCAGAATACAGGAGATAAAAAAATAATAAAATGGAAGACAGAAATTA

Fig. 9.73

CCTAGCCTAAACAACAGAAAAAAAATAAATGGGAAAAACAAAACAAAACAAAACAAGAGCCTAATGGGCCCATGTAATT
ATAACAAAAGATCTAGCATTCATGTCATCAGAGTACAGAAAGAGACGAGAAAGAGGGATGGATGAAAAACTACTTGAA
GAAGTAATGGTCCCAAACTTCCCAAATTTGGTAAAACACATAAACCTGAGTGAACCATAAACAGGATAAACCCAAAGAA
ATTCATACCATTTCATAATTAAACTTTCAAAAATGAAAGACACAAAGAAAATCTTGAAAGCAGCCAGAGAAAAATTATT
CCTTACTTATATAAGAAAATCAATGAAATGGCAGTAGATTTCTCATCAGAAACCATGGAGACCAGAAAGAAGTGACACA
CATTTTTTTTTATGTGCTGAAAGATAAGAATTGTGACCTATACTGAGTGAAAACACCCTCTTTAGGAATGAAGAGGAAA
TCAAGACATACTTAGATAAAAACAGATTATCACCAGGAGATCTGCTGTAAAAGAATGGCTAAAGGAAGTTAGCTAAGCA
GAAAGGAAGTAACATAAAAAGGAACCTTGGAACATCAGGGAGGACAAAAGAACATGGTAAGCAAAAATATGTATAAATA
CCATAGACTTTCCTTCTCCTGAGTTTTCTAAATTATGTTTGATGGTTGACAAAAATTATAACATTTTCTGGTGTGGTTC
TAAGTGTATGTAGAGAAAATATTTAAGGGAATTATAAGTGTGGAGGGTTAAAGGGACGTTCAAAGAGGTAAGGTTTCTA
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CAAATGCTGGTATGTTGGTTGTGTATTCTGCAGCCTTACTGAATTCATTTATTAATTCTAACAGATTTTTGTGGAATTT
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AAACAAACAGAAGAAACTTAAAGCAAAACAAAGCAAAAAACAAAGACTGGCATTATGGAATAAAAAATATGACCTAACT
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TATAAATATTAATCACAGAAAAGCAGAAATAGTTATACTATCTGATAAGGTAGACCTCAGAGCAAAAAAAAAATACTAG
TGACAAAGAGGTACATTATAAAATGGTGTTAAAAGAAAAACTTTAGACAAATTAAATTTAACAAGTTTAATCAAGCTAA
GAATGATTCGCAAATTAAACAACCCCCAGAACCAGAATAGATTCAGAGCAACTCTGGCACTGCTGTGTAGTCAGAGAGA
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CTACTTACAAGAGTAGGTTGCTGTCTATTTACACACCCTGTTAGGTTACAGTTCACTATATACATATAAACCATCAGGC
CTAACTTAAAATGTGTAAGGAGTCAGCTTTAGGCAAGTTTAATTAGGCATGGTAAAAGGGTCACTTCACCAAGAAAATT
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GCAATCTGAATGATCTCTGCTTGGTTTTCTGTACCTGAGGTTGTAGAGTCACTGAAGAGCACATACTTCTTGTTCTCTT
TAAAGTGATAATCCGGCTGGACATGGTGGCTCATGCCTGTGATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACT
TGAGGTCAGGAGTTCATGACCAGCCTGGCCAACATGGTGAAAACCTGTCTCTACTGAAAATACAAAAATTAGCTGGGCG
TGGTGGCACATGCCGGTAATCTCAGCTACTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGAGGTGGAAATTGC
AGTGAGTCGAGATTGCACCACTGCACTCTGCACTCCAGCCTGGGTAGCAGAGCAAGACTCCGTCTCAAAACAACAACAA
CAACAACAACAACAACAACGACAAGAACCAAACAAATAACAACAAAATAAAACCTAAAGTGATGATCACTGATTTTAAG
TGGCTCCTTAGTTGCCTAAGAATCCCAGTTGTGATGGTTTTATCCCTTATTGTCTAGAACTAATGTTGAACACCCTGCT
TTTTAACTTCATCTTGTTTTTCTCTACCCCCATCATCAATATTTGCCTGACTCACCATCTTTCAAGGTTTACCTCTTCA
TACTCAGCTAAAAATTAGCTGATGAGATGCACAAATAATTCCAGTGTATCAGGAGAGGATCAGCTTCCTCCCTTTTAAG
GTAACATGGATCCTTTCACCATCTCCTGATGCCCTGAGACCAATGTCTTGAGAGCATCACATCTTGTTTCATGCATTCT
GACTGGGCATGCTCATCTATTCCAGTGTTCCCAAGAAACACTCATGTATTGATCACTCCGTGGCCAGGCCAGATCTCTC
TCTGGCTTGTCACTGAGTGGACATTTTTTTTTTGATTTCTCAAAGTCACCTCAAATTCAGTGTGCCCAGACTAGAACTC

Fig. 9.74

ATCTTCCCTACCATGTCTGCGTCTCCTCCTGCATTCTCTGTTTCAGTGATAAGTAACTTGGGGGGCATTTTTGATTCTC
CTTCCCTCTTTTCCACCCCAAATGGAACTTGTTGTTAGGATCTGTGGATTCTATCACTCTTGATTCCACCTACTTTTCA
CCATTTTGCCTCTACTTCTCTGGTGCAGGTCTTCACCATCTCTTGCTTAATTGCTGCTACAGTGTCCTAACTAATTTCC
CTGCCTTTAGTCTGTCTGTCCATCTCTAATCCACTTTCCATATGGCAGTGAGAATGTTTATTCTTGCCACTTCTTAGAT
CTAAAACTCTTTAGTAGCTCTCCATTGCTCTCAGAATTGAGAGTCCTTATTATGACTTAAAAATTATTAATTATCTGGT
GCTTGCTCACCTTCCAAGGATCTTCTTTTCACCTTGAACTGGATGCATTTTCCGTATGTACCATTTTCTCTGTAGGTTC
TAAGCCTTTGAAGAGGTGATGCCTCTGCTTGGAGTGTCTTTCCATTCTCCCATTTGCCTAGTTCTTATTCTTTTTTTAT
TTGCTAAGACACTACCTCTGAATAGATGACTTCCTTGACCCTGCCTCTCTCAAGGGTGAGTTACATGCCCTCTTCTTAT
CCTTAGTGTTAAAATTACCACACTGACCTTCAGTTCCCTCTTTACTTGTTTATCTTCCTCAGTAGCTCCTTAAGAAGGG
ATTATCTTCTTCACTCTGCCCTTAGCATCAAGCCTGATGTCTCTATTATAGTCTGTGCTAAATAATTATTAATAAACAA
AATACCCAGTTAGTGTAAGGAAAGGAACCTGCCATGGTAAATAAGTGTGAGAGAGGTTTTGAGGTAGTCGTATAACTGT
TAGAAATACACAAATCACATTATAGATAGTGGCTTCTCTGTTTATCACAGTGCTCAGTTTCTTGTTCCAGGATATTTAG
AAAAAGTATACCTAAAATAAGCGGAGAAGTCATTAGGTTGAATGACATATTCCCTTCTGCCGAGGTATTATAATATAAT
TTTTAAAGGGCCTCAGTTAACAATTAAATTCTTTATATCCTTGCAGCAGTTCTTTTTTTCTAGGTTTCATTTCCTTCCA
GAACTAGATGAGGATTTTTGTCTAACTGATACAATTCCACGTTCTGAGTCCTTGCCTTCTCTCTCTTTCAGTTTCTGGG
TTGTATGTGGTAGATTGCCCAGTCTATACCTAATCAGCACTAGGTTGGAGAAGAATAAACTGCCTTCATGTTGTGGAGC
TGGCAGTCTTCTCTGTTGAGTGATAAACCAATGCCATTCTAAAAGATCTGCAGACCTGTGTGATCTCTTCTTCGAGGGA
GCTGTAAGAACTAACTTTGATGGAAACACCAGTTTTAAAAGATTGCAGTTCATTTCCTACATGCATATTTGCCTAGGGA
AATTTTGTAACATCAACTGAAGTTTACTAAATGAACAGCAAATGAATAAGTATACGGGTTGATGACAAACACTCCAGCC
CAACATCTCTAGGGCCTTTGCCAATGTTTCACTAGAATTTTGGACCCTCAAGGTCATCTTAGTTTTACCATGTTCTCCT
GATTTGTGTTGTATGGGGTCATCCTCTTTAGCAATCTGCAGAGCATAATTTTAATGCTGTCTCCCAGGTGGAGGGTTGA
TGATCCCTTTATAGACCACATTCTAGCACAAATTAATGTCACTGTTTCTTCTGTAGGAGGAGCCTGGCACACTGAATAC
CAGTGGAGTCTTGCTCTCTAGGCTTATCTTGGGAGCTAGTATGCTTATTCTTGTTTCTGTCCCTTTCCTTATGCACTGC
CACAAAGGAATTGCTCTAGAATCCATTTCTTCTTCCTCATCTCCTCCGTTTCTTTGAATCTTATTTGTAAAGTTCAAG
CTTCATTTCCTGCAATTAGGGAATAGATCATGGTCTCTAGGTGCTTTGTCATTCTCAATACTGTGTGCCATTCTTTTGA
ATTACTTCATGTTCCTTTGGAGCAGAGGTTGTATCTTTTACTTTATATGGAAAAGTATGGCTTAGTGCAGCGTGTAACT
CAGACTAAGGCAATTTAAATGCTGTATTTCATTTGAAATGACACATGGAGCTGTTTTTACCACATTTCTCACTGTCTTA
TCTGAAAACCAGATTAGCGCAGGGAAGTCTTGGAGCTATTAAAACCTTCTCCTCATATTTTCTCTGGCTTTCAGAATGA
CTATATAGGGCCTTTTCTTTGGTGGGGATTACACCTCACTGGCTCTCATGTAACCAGTCAATTTTCCTCTCACTTATTA
TGGGACTGTGAAAGAAAGAATTAGAAGGTGAAATTATAGGATTAATGTTAAAAGGAATTAGTTAGCTTCTTTGTTCCTT
TAATTTCCAGTTACAAGAAAAGAATTAGATCAATTACATTTCTATGGGCTTGATCTCATGTAATAGTAGCTATTACCAA
CAAAAATATAACCAAATTGGACTTTTAAGAATGTTCACAGCAGCATTGTTTATAATGGCAAAACATTAGTATCAACACA
GGTGTCCAACCACAGGAAAACAGTTAGATAAAATGTAATTAAATCCTTATGATAAAATGTGACCATTAAAGTTGCTGTT
TTTGAAGAATTTTTAATGTGTGAAAATGTGAAAATGTGCTGATGGTATCATCAGCACCTAGTACCAGTGCCTGGCATGT
GAAAACAGCTTCCAATAAATACATATGTAATAGCTTTATCATACCAGGAAAGGTGGCTATAGAAAATAATAGTAACCTC
GTACTAAAATGAAGAGAACATCAACTTCCTCTCTGCTAGATGGCCACTATCTGCATCTTTTATTCTCTTGAGTATTCTG
GAATCAGTAAAAATGGTGTTTTCAAAGAATCTTATCAGAAATTCAGCTACATCTTTGCTTGGCAATCTGAAGTTTTTGG
AAAGAACGTATTTCAATAATAAAGAATGACATAGAAATTTTTACATGGTAAATATTTAAATAAAATATGACATTTTAAA
TTTAAGTCCAGGGTTACTGTTTCAGAGCTGAATTCAGACATCTGAATGATAAGCGGAGATTTCATTGAGAAAATCTCTA
CTTTATCATTCCTACTGGCTTTACTATGTCATGGAGAGCTCAAAATGTCATCACTGAATTAGTTTTCTAGCTGACTTCC
TCCTGGTGGTGTTTTATATGTTAGTGACATTGATTTCTGGACTTTTCTTTTTCCCATAGGTCTTACCTCATTTATTTGA
AATAGAATTGATTAAAATAACCTATAGAAATAAAAAGCAAAATAAAACAATAGAGATAAAGATGAAAAATGTGGTATAA
TTTTTAAAAATTACCATTCTAGGTATATAGTCATAATTATGAAATATTATTCTGGTCTGAATGATACAAACTGCTCAGC
TTTTATGCTTTAGAAGATATCATTATTAATAACTAATTTATTAGATTTGAACATTCAAGAGCAAAGAGATGTTACACCA
ACGGGTTCCCTTGTCTCCTACTTTCTAGTTTATGTAACTGTAAATGAGTACCCTAGATTATCAGTTGCTTTTTGGGGAT
ATGTTTTGTTATGATAAAAAGAAGCAGTTCGATCATGACATTTGCAGTTATCTTTCTTGCAGTGACCTTCTAGAAATGA
CTCTTCACCTTCCTATCTCTTTCCCTGTCTTGGTTCATGGTATACTCATTCTTTCAATTGTGAAAGTAGAAAGTCAGCT
GACTCTTTGATTCTTCTGTCTCCCTCTGAACCACTGACTTATGGCAATTTCCCTTTAGCATGTGTTCCGTATCTGGACC
TTCATGTTCAGTCTCACTGTCTCTCCCCTGGTTCAAGTTCTCAGATAAAAACCGTTTGCCTTTAGTCTTCCCAAGCCTT
TAGTCTTCCCCATTTCAATTCATCTCCTGTACTATCATAAGATAAATATTGATTTTGCTCTTTTTGTTTCTGCTTCCAG
CTTTATTAAGATGTAAATGACAAATAAATATTGTGTATACTGATGGTATAAACGTGATGTTGTAATACATGTATACATT
GTGAAATGATTAAACCAAGCAAATCAATATATTCATCATCTTACATATGTATAACTTTTTTGTGGTAAGAACATTTGAG
ATCTACTCTTTTAGCAGTTTTTAAGTGTCCAATACATTTTATTAATTGCAGTCACCATGGTGTACAATAGATCCCTAGT
TCTGGAGATTTTGCTATTTTCTTGCCCAAAAAATTGTTAGTAGCTATTACCAACAAAAATATAACCAAATTGGTCTTTTA
AGAATGTTCACAGCAGCATTGTTTATAATGGCAAAACATTAGTATCAACACAGGTGTCCAACCACAGGAAAACAGTTAG
ATAAAATGTAATTAAATCCCTATGATAAAATGTGACCATTAAAGTTGCTGTTTTTGAAGAATTTTTAATGTGTGAAAAT
GTGGAATGTAGCAGAGCCTAATACCATATAAATACAAAATACAAGAAACATTTATGTTGTTTTTTGTATTTTTTTGAGA
CAGAGTCTTGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCACGATTTCGGCTCACTGCAACCTCTGCCTCCCGGGTTCAA
GCGATTCTCCTACCTCGGCCTCCCGAGTAGCTGGGACTACAGGCATGTGCCACCACGCCCAGCTAATTTTTTAAAATAT
TTTTAGTAGAGATGGGTTTCACCATGTTGGCCAGGCTGGTCTTGAACTCCTGACTTCAGGTGATCCGCCCGCCTCGGCC
TCCCAAAGTGCTGGAATTACAGGTGTGAGCCACCGCGCCCGGCCAAGAAATATTTATGTATATATGAATGTTAGCAGTG

Fig. 9.75

GTTATTTCTGAGTGGCTCAATAACAGCAGATTTTTCTTTTTGCCTACACTTTTCAATTTTTCTACAATAAATTGCATTG
TTTTTATAATCAGAAAAACTTCCTCTAATGATTGGTATCTGTAAGAAAGCTTGTAAGTTATTTAGTTTAGTTGGTCTTA
ATATATTTTTGGATCATGGGCCTCTTTGAGGATCTGACAAATGACATGGAACTTCTCTCAGAAAAATGAACATCTGCCC
ATAGACACAAAATATGGCATAGAACTTCAGTAGGATTTTGGGCCTCAGATCAAAGAGCTTTTTGATAGTAAGCACAATG
CTCTCATTTAAGAGATGATGGTGGACCCAGAGGATCTGCCTGCTCTCCCACAGGAGGCTGGGAGCAGAGGCAAAACTAA
TTCTTAGTACTTTAAGCTTTTGCCTTGAAACTAGGCTGTCCAGGAGACTTGAGATCACTTTGCAATGCCCTTCATTATG
TGCTACTGAGGTACCTTCTGTAAGTTGCTAAGCCTGTGAGGTAGCCGTCCACACCCGAAGAGGGTCCTCCCTATGGTGG
TTACTAATGTTATTCTTTGTAGTAGTGCCAAAGCTTTTCCTTTTGGTAAAGATAAGCTTTTATTGGAGAGACCTAGGGG
AGTGGCTTCTAAGTCAGTGGTGGGTCCTAGAAGTAAGCAAATAAAATGTGCGCCTCCCATTACTGAATTTTGTATCTAT
TACTTTCTTAAACATTTCCTCTCAGATTTGATGATTTGTTGTAAACAGGCATGATGAAGGCTTTTTTTCTTGAGAATG
TTTGTTTTCTTCCATCATCTGGCAGTTTTCCTTATATGACCTTGACTATGGTGGTAACAGGAATGAGGCATCTGTCTGC
TCTAGAATTTTTCATTGTGCTTGGTGCTGTAGCGGTTCTCTCTACCTGGTGCCTGCACAGCCTGCATGATTAGGGCTTG
GAAAGGTCTCATTTCCTCTGGTTTTAAGTGATTTTGTTCTTTCATAGCCTTAAGTTAGCTAGTAAGTGAGGGAAAAGTA
CCACTACCAGCACCCCAGAGCCAGCCTTTGACTGGGAATGAACGTGGAAGAGTGCCCTTTCTTTGTCAGAAACTCCTAC
AGCGCCCTGATAAATCTTGCCACAGACAGCAGATTTTACAAATAAAGGAGAAGTGTTTTCTTTGGTGCAAAAAAGACAG
CAAACACAGATCTGGAAACAGCTGTCTGATACTTTTTTTGCAAGTTGTTAAGCCCTCTACAGTCTAATCTCTGTGGAGA
GCCCTGAATCAAAACAGAGGATTGAATCCCTGAATTGAGCAGAGGAATTGTGGAAAAGGTAAGGAAATGAACTTTTTTG
ATGCCTCCAAGTACCAGCACTGGCCAAGGTGCTTTCATAGATGTAATATTGAATCCTAGGAAAACCCTGTGAAGTAGGT
GGTGGTGGTCTTATTTTTACAGGTGAGGAAACTGAAGCCCAAAGCGTATTTGCTGAAGTATACAGTTAGAGACAAAAC
TGAGTATGTCTGCTTCCAGTCAAGCTCTTTCTCATCTATAACAAATAGGTTGTATGACAGCACATGGTTTTGAAGTGCT
CTAATTATCTTTTATGTGTATGTGTTTCAAATATTTTTATTTATATACTATGATCTCATTAATAAAATTAGAAAATACA
GAAAGATATAAACACACACACAACCCTCACATGAAACAGTTCTACTCCAACCACAGCCGCTTGTAGACCCTGATAGATA
ATAACTGGCCCTGATGAAGATTTCCTCTCCTCTCTCATCTCTTTGCTTATATGCTGTTGTATATTTTCCAATCCTTTCC
TCCCAATCATATTTCTAATGTAAATGTAACGGAAACACACGGACAGTTTTACGTCCTTATTCTATATGTATTGGCGATA
ACTTTTTGCATAGCGCTTCATTCTGCACATAGTTTAGTGTTCCCCCACTGTCATCTTCATAAGATCTGCCTGATGAGAG
GAAAAGCAGAAAGAGCACCATAGTCCCTGAACAATCTGGGCAGAAACACATGGGTTTGGGATAATACACGTGCACTTTT
CTTCACTCCTCTACATCTGCTCAAGATGAAAATGGTTGGGACATTATCATTTTGTCCATAGCACAGGAGAACATAGTTA
AGTCATTTGGTTGAGCCTGGAATGCAAGAGAAAATGTGTCTACTGACATTCTATTTCCACTTCACCGATAGCCCTGAGA
AGACAGAAAGATGGGTATAACTTGGGTGTCTTCCTCCTGCTCTCTTAGAAATAAACTCTTGAAACTTATTGACTAGATT
GTATATCCACCTAGAATTGGGCCAGAGTGAAGACTAATGCCTACAGTATGCACACCCATGTTTGGGTGCTGTCAGAGCT
CAGGAAACAGAAGCCTGGAGATTGCCTAGTCTCCTGCCCTTTGCAGATTACCAGCAAGCATCCTCTCAGGCACAGACTG
CCCAAGGGTGAAGCAGCAGCAGCCTGGAGAAGCTGCCAATGGTAATAGGATGCCAAGAAAGAAAAGTGAGCAAATTAGA
AAGATGCCCACCAGCACTTATCTATTTGGAACCCAATCTTTTCTTTCTCTACAAAAATTTTAGATTGCCAGACTCTTGA
ACTTCAAGGTTTCCTTCTTTATAAAAATTATATTAAAAAAGTACTCTCATTCCACTATCTATGTCTCTCCAGAGCCTGC
TTTCATGGGGCTTTCCAATATCCTGCTGTGGGGAAGCAAACTGTTTGCACTTCTTGCAAGAGATTTAACTTATTTAATC
AGTTTCCCTCTCTCTCTTTCTCCCTTGCATTTACTGATGATAAGATTGTGTTCAGGGTAGAAATTTGGCTGCCTGTTTG
AGTGACAACAGCGGACCCAGCCCTTGTAAATGTCTGCTCCTTCTTCCCGCTGCATCTAGTTTCCTGCCTTCTGCCAGGT
CTCAGCAAGCCCTGTGAGGCAAAGCACCTTCTTCCTTCTACTGTGGACAGCTGCTTCTCCCAAGCTGTCTGCCATCTCA
GGAGGGACCAACGCTCTTTGCAGTTCTGTAGCTTCTGTCCTGTTCTTGTGAACTTATGTTCACTAATGTAAATGGGGCT
TTATGTCTTTATTGACTTTGTAGTGAATACAATTGTCAGAGAGGCTGCTTCAAAGAATCACCTTGCTCTCCTCTGCCCT
GACTCGGGGCTCAGCTTGGCAGGAGGTGTGATGTCTCAGAGCAAGTACAGCATTTTTTGAAGGAGCAAGGTGTTAATGG
CAGGTGACTCTGGCCCCTTTTATGTGCTTGAGCTGTTTTGCCAGGTACAGAGTGGGAGTGGAACAGAAAAAGGGTTTTT
TCTAGTCTAGGGTCCCACCAGCTAAGGCCTCCTGATTGAGCCATCTGTAATCCCAGGGTGGACCTTGAGGCAGCCTATA
AATCATTCTCTGCTCTGCCACTGTGTCAGGTTAAGGCTTGGAATTAAGGTTCCAAGAGAGGTAAAAGGTAAAACCAAGA
GCTCATCAGACAGCCTGACCACAAATTTCCCTCTCCATTGTGCTCCTGTGGGTGAGGTCTCCTAGCCAAATGACTTTCC
TTATCTTGAGGACCAGGCCCAGTATCTGCTTATCCCTGAGGAGTGGGTTTTGGTTCCCTCACAGCCTGTGGAATTATTC
AAACAAGCCAGTCACATCCTCTTGTGGGGACCAGGGCTACCTTGCCCTTCTGTTACTTCAAAACCAGCCTCACATAGGC
CCTGCCTGTTCACCTTTCCTGAGTGTGGCCCCTGTGTGGCCTGTGTGGGGTGCATTGTCCTCCCCTGGGCTGTGAGTAG
ATATGACTAGCGAACTGCTATTAATCTCCTCTGTTAAGGTTGAGTGTCATGTGGTTGGCCATCCCCATATTTCTAGGGT
GGGAACTCCTCCCTCACCAATGGGGTAAAGAAGACACTGCATTCAGCTTTTCTAGCCTCCTAGCATGTATAACTATATT
TCCACTTTTCAACCACTTGCCCTCTCTCGTGTAATACACTACAAAGAGAAGGAAACATGCCTGTAATTTTCATCATGAT
ATCCTTGGTGTCCAGCACAGTGTTCCCTGGCACTTGATAAATATCTGTTGGATAAATGAATGAGTGAATTCCAAGGGTT
CTTTCTGAGTAAAGATTCCACTAAATAGTTTCTCCTCTCACTTGCAAAATGTTGTCACTCCATAATCAGGGATGGAATG
AGGGGTGTGAGCAGGGTGTGCACGTCACCTCTAACTTCTCCAGGTTCTTCCAACCTCAGAGGTGTCCCAAGCAAGCCAA
AGAGAATAACAGATCCTTAGGATGTATCCCACACCCCCAGTTCAGTGCCATCTCAGTGTTAGATTGATGTACTTTTCTT
GAGATAAACATTGACAGATGTCGCTGAATTTGGCAACCAACTGTACTTCACATCTTCTGAGACATTCTAGTCCACTTAC
CCAGTACATGTGAAAGGACTTTAGTGCCTCCCTCTTTTGTTCTCTGGGCTATCTTCTCCAATTCTGATTTGTTGATGTA
GATGGCTGTTACCAGCAACAATGAGAGCGTGGGGCCTGGGGAGGCAGAGAGCTTTCATTCTAGTGTTTTTGTGATTGTT
TTGGCTATAGCTAGGCCAAGGTACTGTCCTATTCTGTTTGTATTGCAGTCAAATTAATCAACAGGCATTTTTTTCTCAG
CCATCTTCAAGTCGTGTCAGGAAAAATTTGGCCTACATGAGGTTTAGGAAACTATCTTTTATTTCCCTTTATTTTCATG
AACATTTGAGCTTGAGGAGAATGTGAGCATTTTTCAGATCATTGGGTCTTATAGTTTCAGGCTTCATATTTTGTGCATT

Fig. 9.76

CCCACTTCTAAAGCTTTGTTTTCATATATTTGCCCATTCCTCCAATCTAAGTCTCACCATTTAAAAGTTAAGTTCACA
TCTGGTTTCTGGGGAATTGTTGCCTCATTTATCTTTTTGTCTCCTTTTCAGAAATCCCTTTTAGTTTATTATTTATTTT
ATTATTTTTATTTTAGTTTATTATTTTTTCACATGTAGTGTCACTGGTATTTATTATTTTTAGTTTATTATTTTTTCAC
ATGTAGTGATATTATTTTTATTTAGTTTATTATTTTTTCACATGTAGTGTCACTGGTATTAATTTTACTAATTTTTGCT
TCTCAAAGCCAAGGACTTTGAGGAATTTTCTTTTCTTTCCAGGGTGCCTTATACAGTGCTCTGCTCATAATAGGTGTTT
ATTTTTCATAATAGGTTTTCATTGCTTGATTTTTTGATAGCAGGAACCAGGTAGGTATGCCTCTATAAGGGTGAATGTT
GTTCATAGGAGACAAAATAACAAAACTGGTGTCAGTTTGTTTGAGCTTACATTAAACGGGTTCACAAGGCCTCCTGAGC
TCTGTGTATTGAAGCAACAGAAACCATGAAGCATTTTATTGCAAGAGCAATCAGGCAACTTCCCAGATGTTGCTAAACT
CTGCTTTAACTGTTGTGTAGAGCTAGTTTTAACTGCATCTCCCACTGCTACTGGAGACAATGATTCTAGAGATGTTACT
AATTGTCACTTGTTCTTTGCCTAGATTTCTTCTCTGCTCCTTGTGGCGTCACCCAGCCGCTAGACGGGCAATGGATTAG
AATTTACATGGAGGCTGTGGTCACGGTTGTCTCAGGTGTTAAGGAACAAAGAAAAAGAGGTGCAGAAAGAATAAATCAA
ATCATTATTTTAAAATGTCTTAGTTTCCAACCAGGCAATGGAATTTAAGGGAGATTCCCTGACGGTTACCCTAAGACAT
CTGCTTTGGAGCCCTTAGCAGAACTCTCTCTGTGGGATGATTGGTCCTAAGCCTCATTAACAGAGGCTTTGCGGCTCCA
TTGGAGGTTGGTGCAGCACAGGTGGGCGTTAGCACAGAGGTTTATAGGACCAAACCCACTTCAGCAACCAGCACTAATT
GGCTCCCCAGGGAAGTCCCATGAGAAGCTGTCAATCGTGAAGACTGAGTTTTTGTTTATAATATGTAGTGATTTCTCCT
TTGCTGCTCTTTTTCCTCCCCTATCCAAACTGCCTTTCCTTCTTGCACAAATAGGTGGTGGTTCCCAAAGTACAGATAA
TTAGAAAGTTGAGGCAAACCTTACTTTGATTCCAACTGCATTTTTCTCCACTCTCTATTCTCCCTAACCCTTCCCCTAT
CCCCACCCTTAGTGTGAAACAATACCCTGTCATATGGGAGGAACCCTCGCTGAGGTTGTGCTGACAAAGCTAGAAAGTA
GTGTTGAAAAATAAATGTACATCATCAGTGCATTTTATGAAGTGATTTCTAGTTTCTGTAATGTGACTTCAATTATGCT
GAAAATGGAGATCTTAGTCTCATCACGTACTTTTGTTAAATCATTGTATTTTAAGGTTAAGTCACAGGGCAGGAAACAC
CTTCTCTGCAGGATATTGGGTGTAAAATAAAGAGAGGCTTTCTGTGTCCTGGGAATGTTCTGCTAAGAAGACAGTGATG
ATAATAGTTACCACTGAATAAGTACTGACATGTGAGGAACTACCAGGATCCCTGCTTTACAGGAAGAAGCCGAGGCTCA
GAAGTACACTTGTCTAAGGTCCCAGAACAAGTGTAAGTGTCAGGATTTGAACTTAAGTTTGCCTGATTCCAAAAGTTTC
TGTTCTTAAAAGCTGTGTTTTGCTCATGTTTTGATTTATGTTTGCCCAAGGTCTTTTGGTCCAACTACAAAAATAATTT
AAATTAGTTATCAGACCAAGCATTCTTTCCAGTGTTTGAGGGACGGGAGCAACTCAGGTGTAGTTGACTAACCATTCTA
CATTGGTGTTATTTCGTGGGGTCAATTTCAGGGCCGTAATTCAGTCATAGTTATTGCCAAATCCAGGTGATAGTAGGCT
TTGTGGGTGGTGAGGGTAGATTAGAAGGACTTTAGCTTGCTTATAATCTCCCCTGTTCTTTCTTACGCTGAGGTAGAAG
GTTGGTGAAGAGACTAGAAAGACTTGGGGGTAAGTTCTCAAGTATTACACAAACTGAAATTTGGTTCTGTCAACTGCCT
AGTTATGGGACATGATTAGTGCCAACAGGTCACAGGGGGATTTCACTTCCTCTGGTCAATATGATGCAGGATACAGGGT
TGGGGGATGTTCAAGGAAATAACAAACTGCAGAAACATCATTTTTATCTGTTTCATGCACACTTGTGGCCCAGGAGATT
GGTAATTTCTTCTTTCTGATAATACTTAATTGAAGAGACTTTTATTTTTGACTAGTACTTACAGGAGGACTTAAGCCCG
ATCAATGCAAATTGATTTTTTTAAAAAATCATTAAAATTTAAACCTTGGGCATTATCTTTAGGTTGTAAGTGCTAAACT
CAGCCCACCTCTTTCTTTCATTATGAGCAAAAGTAATCAAAGACCATCAGTGCTAATTAATTCAGATAAGCCAAAAACA
TACATATTCTTATTTTAAATGAAAGAAATGTTAGTGTTGTGATTGTTTTTATATTATTTTAATTAAAAGTTAAATGGAA
TAGAAAGGTACCAATTTAATTACATATTGAAATTCCTCTAAAGCCTTCTCAGAAGTACTTCCTTTTAGTTGCAGATTAC
AAAAAGAGATGTAGGGGGAAGATATAAGGGAGAAGGAGAATCAGTTCAAATTGTTTTCAGGTCTGATTTGGCGTAGGAA
AATTGATTCTGAAAATCTAAGTTTGGAAAATTAACTAAAGCAACTCTTCTCAAACATAACCTGGTCAGTGATTACCATC
CAAACATTCAAGGTTGTTTCTAATTTGATCAAGAAATGGTATGGAACAATGCACATGTAATCTAAACCATATTTTAGCT
GTAATTTTTACCTTCTCCTATTGTATCCTATGTTCAATAAAATAAATATCTCTAGCAAAGAATTCAATATAATAATGTT
TCCAGTCTTCCTTCATTTTTATGTCTTCCCATAGGGTAGACAAAATTCCAGTAAACAATAAAATGATCAAAATATGAGA
AAAATAAGGAGAATGAGAGACAGTCTCTGGGTGGCATATAAACAGGATGGCCATCCTCTGACTCACAGGCTGTCTTGTA
AGGTTGGCAATGACTTTGAAATTTTATCAAGTCTATCTCTTTTCCTTTTGGCAAGACTATTCTTATACCTTTCCCAGTA
GATGTTAATCTATCCTGTTTTTAAATGAAACTTCTAGTACAGAAGACACATGGTCCCTTAGGAACTCATTGTGAAATTA
GAGGGTTTTCAGAGAAGGACTCTGTTGTTTATTTTGATTGTTCATCTTCTCCATAGGGATGATCAACTTTATATAAACA
GCGCTGCATCCATGTAAAGTCATTTTACATGGCACTTGAGCAGATTGACAGATATTTAGAGAACATGACCGCCTTAGGG
AACAATTAGTTCAGTCCCTTAATTGTGACTGGTTGGTCTTCTCTCTTCCAGATTGAGATTATAAGTTTCTTTTATTATA
AATTCATGTTGTGTTGTTGACTTATATTCACTTTAGACCTTCATATTTTTTGCCTACTCTTTGCATTGCTAGTATTCCC
CTGCTCTGTGTTAAAATATGCTGGTTCTGTCAGTTAATATCCAAAATATGTGATTTTTTTAAAAAATAAAAAGTGTGAC
AGGGTCTATGATGTATAGGACATAGGATTAGCATGGATATGACTCAGTATCCTGGGCTCCAACCATGATTCTGTCACAG
CTACTGGTATGACTTTGGGCGGGTAATTTACTGAGCTCAGAGGCCTCTGAGCCTCAGTTTATCACTATCAGATGTGTGG
CCAGATTCAGAGCAGCTTTTTCCAATGGGTTTTCCATGGGATGTTAACAGATATAACATGAAAAATGGTCCCATTTAAA
AATAGGTGGTGGTGGTTGGGAGGGGATGGGGAGGCAAAGATTAAATGAACCTAAATAGATTTCTTTGCTGAAGCATGTG
AGTCTTTCACATATTTTGGCTTAAAAAAAAAAGAATTGTAAATCTTCAGATCTTTAAGAGGCGTTTCCTGAAAGTATAC
AACTATAGTTCCTTTTTTTTTCTCTTTTTAATGCTTTAGTGCCGCTAACCCTTGACCAGGCTCATCTGCAAAGCAGAAG
TAGCCACTTTCCTTGGTGCCCATCCCAGAAATACAGTAAAACACCCAGGAGGTCACTCAGGGCTCTTGACTGTGGATGA
GTTTATGCATTCCACGTGTACCTTTCTGCATCATGAACTCTTTGAGGGCAGGAGCCTTTCCTTATTTGCCTTGTGTAAA
GAGGGTCTATTCCTGTGCTTATACCTGGAAGATGTGTAGAATGAGTCAAACTGTCCATAAGTGGAAGGCACTGCCTTGA
AAGTTTTCAGCTTCCCTATCACAGAAAATGTTATTATAGAGTGAATTTTTGAAATGAGTGGAAACTGTAGTCAAGATGA
TATCTATGATCAGGAATCTGTGAGTTTCTAAGGTTATAAAGATAACATAAGAATAAAATTACTCATAGATAACCACAGG
TAGGTTAAAAAAGGGCAGAGTACAGCTTTGCAGGTGGTTCTTACTGGCTTCTTTCTTTGGTCTCGATAAATTTGCCTAT
TACCTTGATTCTGTCTGATAATGTGAAATTATTAATTGGAGAAGTTTGTCCAGATTACCAATATATGAGGAATGGACAA

Fig. 9.77

AATGCCACGACATTTTCTTCATCGTTCACCTTGTACAATGCCACTGTGTACATACAAATTCAATTCATTAAATTTATGA
TGAGTTTGTTTTTCTACTTTGCTGTTCCATTACCTGTTGTATTTCTTATAAGCTTCTGGAAAGCATAAAATATGTCTTA
TATACATTTATTTCTCCATTGATACCTAGTGTTTTATAATTATAGGAAGAACTCAATAAATGTTGAAAAATAAAAAGAT
GACTATAGTGGCTCAGACATTTTTTCCAATTTAGCATCTGAAGATAGAGATAGTAAATATGATGAGCTTATATGTAGCA
GAAATTAATGTTTTGAAAGTAGGGGAAAAAACCCTATCATTTCACTACCAAAGAATAGCCATTGTTAAGACTTCAGGTT
ATTTCTCTCTAGACATATTTCCTGCAAAGATAATTTTTATGTATAGTTGTAATCATATTGTATATATAATTTTGTGTCC
TGATTTTTTTCATTTGAAACTATGTTATAGAAAGTGTTTATGATAGTTATATTTGCTCTTTTGTATATAGGAAATATTT
TTACAATAAAATTTTAAAATCATAGAAGTCTTAAGTAATATAGTTTTCACTAACAGAATTTTTAATTGTTTCTGCATG
GTTTCCTTAAACATTTATTATTTTATTATTATGTTTCTTATGAGGTTTTGCCTTCATTATTTATTTATTTATATGCAAG
AGCTGGAGTAGACATTTTTAAACAGGAATATTTTTATATTTTTCCTTTTGAATATTTTCAAAGCATCAAACACTTATTG
GCAAACTGCTTTTCAAAAGTATGTGTCAATATTTGCTATATCAAACAATGTATGAACATTCCAAATTCATTGCAAGTTC
ACCAGCAAAGAACATTTTTTTTACTTTTTAAAATATTGACTGATTTTAATGGAAAATGCTTTATTATTTTGTTTAATT
TCTGAGGGTATTTTTTGGTCTTATTACTGAGGTCAAATCTTTTCTCATACTTGTCATTTTTGTTCTTTTGTGAATGGTC
CATTTATGTCTTTCTATTTATTTTTCTTATTGAATTGTATGAATGCTTCATTCCATAAAACATGCTATTTCCTGCAGGG
ACTGTATATTCACACACCACTGCATTGCTGATGCCCAAGGATAGTGTATGAAACAGGGTAAAATCACCATCGGCAGGCA
GCTGGAGTAGCTTGTTCTGTGGACTGTTTTGCAATGCAATAATGAGGAGGGAGCTGAGTTACTAAACAGTCCCCTCTTT
CTGTTAGTTCATTATTGCAAAAGCAAGGCCTGGCGAGTGAGGTGTGTGTGGCAGGCTTCATTCTTCCCTTTGTCTCAAC
TATTATTAGATAGGTCCAGAAATTGCTGGTACGTTGGGGCTGTGGGCACATTTGGTTTATGTTGCTTTCCTAGATGTTA
AGTGTCGCAACAGCTCGCTATGGTTTGCTCCTCACTTGAGCAAATTGATAACAGCTTGTCTGTGACTCCTTAAGAATAA
TGAGAATCAACCTCATTTTAGGAGAGGGGACAGATTGTGTCTGTACTTGGCATCCTTCTGCAGACATCCTTCTGCAGCT
GGGATTGCTTGAGACACTTCACAGAGTTGAGGACTCATATTGACAGAGAAATGTCCATTTTGTCTGAGGAGCTGCTGAA
TCTGTCAGCATCTACTGGCAGAAGTGCTTTCTCTAGCATGACTTCACCTCTCAAATCCCTGGATGTAACAAAAGTCAAT
ATAAGATCTCTGCAGTCTATTTCAGTCCTTTGTCATTTTATCAGATAACTAAATGCTAAATGCCTTCAGATACATCATA
AGCTAAGGGCTCCTTTGAAAACAGGACAGACACTTTACAAACTACATCAAAGCATGCAGATAGTTTTATTTTTAATACT
TTTTTTGTCTTGCATGAAATACTTGAAAATAGTTCAGATATCGCCGCTGCCACAAAAATTGTCCTATAGCAAAGAAAAT
AATAGCTCTTTTACCTTAATAGCGAAAGTTTTGTGTAGAAATGATTTGAGGATAGAAGAGGTTTTCCAAATATGATTT
TGTTGTGTTTTCTTTTTTCTCTTTCTCTCTTTCTTTTCTTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTCTTTCTT
TCTTTCATTCATTCTTTCTTTCTTTCTTTTTCTTTCTTTGACTCTATAATAACTTCTTATTACATGCAGAAGTAAATCT
TAATTCTTTTTGGCCATCTTTTCTGTGTGAATTTTATTTTATTTTAAAAATAGCTTTATTGAGATATCCTTGACATATA
CAAATTGTATATATTTAAAGTGTACAACTTGATGTTTTATTCTATGTATTTATTATGAAATGATTACATTCCAGCTAAT
TAACATATCTATCACTTCTACATAGTTACCATGTGGGTGCATGTGTGTATGTGTGTGTAGATATACGTATGTGAAATTC
AACATGAATTTTGGATTCTATAATATTGTTAAACACTTTAGAAATAAACTTTCTTGTCTCTACCTCAGTATGTTTGCAC
ATACATTCTTCCCAAGAAGCAAACCCATTCTTGTTTGTCAGTGGAGGCTTTACTTCTTTCGACATTTGCCTCCTCAATT
TTCTTCTTCAGTTCTGTCTCCTCCACATGATGTCAGCTCACATATTCAAAATATGTTGCCTTACAAATCCTCTTGGGTA
TGTCTATGTATTATTTCCTTAAGGTAGGACTAATTTTACATTCTTTATGTTTTCCAGTGTGTTGACTAGAAATTTTTTT
TATGCAATGTGTTTCTAATAAATGCAGTTGTTTGATTCTCTTTCGTTCTAAAACATTCATGAGATTCAAATTGTGATCA
TATTTCCAGGTAATTGAAGGACACATGAGTTTAGGGTTATTGATTTCATATTTTAAACAAAATCACAAATTAAGGATTT
ATAAAATAAAATAGATTGTGATTATATTTTTTGTTTGTCCCTTAATCTTTAAATAAATAAGTGGTTTCACAAAATTTTC
TTTTAAAGATATTTTAAAACCTCTGATGAGGCCATGCTTAAAAATAATTAAACCCATTATAAAGTAGTGGTACTGATGG
TGATGTTTGAAGTAATATCTTTGAGTTTGGGGATTATGTGATTTTGGAACTCTGCATGTAGACCAACTTCTGGCAACAG
TTTGGAATAGAGAGGACAACTTTGGCCACCTGGAGCAACAGCAAAATCTGATGGTGATAACTCTCAAGAGAGTCCATAT
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AATACTGAAATTGTGAGCTCTTTCTTTGACAACAAATGTGTCCAGGGAGATGATGAGCTTGTTAAACATCAAGGTTATA
ATTCAAATGACACCATCAAGTTGAAGAAATGTAAAAAGATATACAGACACAATGTTTGAGGAATCATTTGCCAGTGTTA
CATTGGAAAATATGTTGCATAGTGTTTTCTTAAGCTTATTCCTTTGTTGTTGTTGTTGTTGTTGTTGTGGAGATAGAGT
CTCACTATGTTTCCCAGGCTGGTCTCAAACTCCTGGAGCTAAGTGATCTTCCCACCTTGGATTAAAGGTGTGAGCCACT
GCACCTGGCCATACTTACTTTTGAGTAGTTGGTGATAATGATGATGTTGATAGAGAGTAATTAAGTATGAATGAGTTAT
TTACTTCTTATAACAATATACTATGTTATACTTATGTCCATTTATAAATGGAAAATTGAGGCTCATAGAGAAGATGTG
AGTTGCCCTAGGTTATATAGCTAGTAAGCTGCAGTTAGGATTTGAACCCACTTCTCACTGAGTCCAAAGACCAATATTT
TGAGATACTGAAAAGTTTTTTAGGATATAATAAATGAGTCATGAATAGTTACTGTGACATATAAAAGAGGGATTCCTTG
TGTATTCTGAGAAGTTCCAATGAGTTAGTAGTGTTGGTCAAGTCGCCTCTTGGTATAATGTTAACATTTCTGGTTAAAC
CCTGAACTCTGCAGCCATCAAGAAATTATAGCCCAAGAACAAAGGGATCATAGGTAGTCTCCCACATAGTGATGTCTGT
CCTTTGACAAACATCAGTGTCTTCACTTTGACAATGGTACGTTTTCTTTTGCTTATCATCCCTGGTTAAATCTTTTTCT
AATCTCAGCTGAATGGGTTGAACAATGATAGTCATTTTCATCCCTTGATATGAAGAGATGGTTACTAAACTCAAAGCAA
GAAAAAGTGTAAATATGACACTTCTGAGCCGGGGAAGCAAAGTGTAAACTGAGGCAGCAGTATTCTTCTTTATGAAGTA
TTTAAGCCATGATGCTATTTTTCAGTGTATTTGCTATGAGAATGAGAGTACTTGCTAATGAACACTCTCATTGTATATT
AATAGCTGTATTAATTGAGCATTTATTATATGCCAGGTACAGCACTTAGGGCTAACTGCATGCTTTCTCATTTAATTTT
TACAATGACCTTATGATGTATATACCATTAATATTCTCATGTCATAGATTAGCAACCTGAGGCACAGAAAGGGTAAATC
ACTTTCTAAGATTACACATTTTATTACTGGCTTAATCAGATGATGTCTAAGTATCATGATGACATAGTCTGCGCTATTA
ACAACTCTCTCCTGCTTTTTGCACTTTAAGCATTCTACATGATTTTTACACACGATTTTGCTCATGGTTTACCTAGATG
ATTTTGAAACTCAATCAAGTTATGGCTACAGGATTATATGAAGGGACACCATAAAAACCCTGTCTATTAATTGCTGTTG

Fig. 9.78

GCTTTGCTTTAGCAGAAGACACATTGGATTGGGCATCAGGGCAAATGGATTCTGGCAAAAGATATGCTCTTGGAACCAC
TTCTTTCAGCTATTAAGTGGAATGAATAATGCTTCACTTGCTTAAAGGCAGGGGCTGGACAAGATAGCATCTTTGACTG
AATATGAACAGAACAACGTATTTCTAATTGTGTTCTTTAGGGGCCAGGGTTGCTGGCATAAGCATGAATTGAGCATCTT
AAAAGGTGTCATGAAACCATGAAGGAAAGAAATCTCTTGCCTCTTGGTATAATGTGAACATCTCTGATTGAACCCTGGA
CTCTGCAGCCAACAAGGGACTACAGCCCAAGAACAAAGGGATCATAAGTAGTCTCCCACATAGCAATGCCTCTCCTTTG
AGAAACATCAGTGTCTTCACTTTGACAGTGCTACATTATCTTTTGGTTATCATCCCTAGCTAAAAATAATTTTAGAAGG
GCATAGAAAGAAGAGGTATATCTAAGATACTCTCTTCTAAGTACCAAGGTTGATTGATGATTCTTTTCAGAAACAAGAA
ACTTTCTTAAAGTATAATATGTTGATGGCTTTGTTGAGTTAGCAATTTATCACACCACATAGTTCTGTGGGTAATTTAT
CATTGAATCAGGTTCCCTTTACTCTGTCCCAATATTATAGGTTAATCTGGGACATGTAGTTTCTGAAATACCGACAGTC
CCATTTTGAATTATTATTTTAGAAGCTGTGAAGACATTTAGCTCCTTTTGATTTCATACTCTTGACTTTAGTACTCATT
GTAGACATGAGAAGTATGTGGCATTGTGTGAGCATCTGTAAAGATTGTAAATGATATTAATTAAGTTGGCTGTGCTTTT
TCTCCTCACAATGGATTCTTTTGTTAGGCTGGTAATAATCGCGTTTTTGGTAAAAACACCTCATGGAATTTTTTTCCTT
TCTCATAAAATAGCTGTTTACTGTAAAATTGAGATAGCCTCTCAAGTCTGGAACACCTTTCAATTCATCAAAAAGGGAC
AACCTAATATTCCAAAGAAGACTCAATCCTTTTAACACACATACATTTTAGGGCCAGTCAAGAGAAGTGGCCTGTTCTG
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CTTCTAGCATGCCTGGGGGATGACTTGCTCTTTCATATTTGTGGAACCCTATGTCAAGAGAGAAAACATCTAAAAATAA
AAACGCATTTACTCAGATTCTCTAGGGCAAGGTGCAAAGAGCCTGTGCTGTAGGAGCTCAGATCAAAAATTAAATGGTT
GAAACCTGCAGAGCAACTGCCGTCAGCAGAACCGTGGGCTCCTTCTGGTTGATTTTGTGCCATTCAGTTAGTTTCCATA
AATTGGCCTTGGGTACTGATGTTCTTTGGTCTTTTTTGTGCTGTCCATAACTAATAGTGACCGTTGCTGGTAAATTGTT
TCTTCAGTCCAGTGATTATTGGCCTTTCAAAGCATTGACTTCCTCCACCAATGTATACAGTCACCAAATGGGATCTGGT
TTGTTCAACATTCTAGTCAAGTTCCAAGTGGTAGGAATCAAAATTCCACTCTAGTTTATGTGTATTATTCCTATAGCTC
TTCCCTCGAGATGTGGCATGGGATGGAAAATGGAGCCTATGTGTGGTATAGGCACTACTTAAAATTTATCAATAGAGAG
GGATCCATGAGGAGGAGGAAACAAGCCAAAGAGATTGGGCAGGCTAATTTTCTTCTAGACAGTTCCTGCTCTCTTGGAT
TTTACTCCAATTCCCCACTCTTTCCATAGGAGTAAAAGTCTTAAAACTTGAACTAATGTTGAATTTTAATCCTGAATGG
TGTAGCATCCTTCATTTCTATCCGTCTCATTATCAGCCCATACCCCTGCCATTGCCACTACCATATTTTCAAATGTCTT
TCAACTCTCCAAAACCTACTGACCCTAGTTTATCATGCATTTGAAAGGCTCCCCACTTTTTGTAGAACTTCAGGTATTT
TAAAACATATTTAGAAAGACTCTAAATAAACTGGAGTGAGTCTATAGCTAATGTTTGACCAAAAAAAAAAAAAAAAAGTA
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CATTGTGCAAACATTGTAGAGTGTACTTAGATACACCTGGGTGGTATAGCTTAGTATACACCTAGGTTATATGGTATAT
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CCCAGAACATTACTATACACTACTATAGACTTTATAAACACTGTACACTTAACGGTACACTAAATTTACAAAAATATCT
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CACAGGTAGTCATATGTTCATTGTAGCACTATTCATAATAGCAAAGATATGGAATCAACCTAAATGCCCATCGATAATA
GTAGATTGGATAAATAAAAAGTGGTACATATACACCATGGAATACTATGCAGCCATACAAAAGAATGAGATCATGTCCT
TTGCGGGAATATAGATGGAGCTGGAAGCCATTATCCTTAACAAACTAATGCAGAAACGGAAAACCAAATACTGCATGTT
CTCACTTACAAGTGGGAGCTAAATGATGAGAACACATGGACTCATAGAGGAGAACAACAAACACTGGGGCCGACTAGAA
GATGGACAGTGGGAAGGGGGAGAGGATCAGGAAAATAACCAGCAGGTACCAGGCTTAATGCCTGGTGATGAAATAATCT
GTACACCAAACCCCCCATGACATGAGTCTACTTATATAACAAACCTGCACATGTACCCCTAAACTTAAAAGTTAAGAAAA
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TAAAGCACCATATAGCTGTACAAAAATATTTCCTTTCTCTTTCCTTTCTCTGTATCCTTATTATATAAGCTTCTTATTA
AAAAATGTCTAGTTATCTCTTTTATTTTTTGAACTTTTTTCTTAACAACTAAGATACAAATACACATATTAGTCTAGGC
CTACATAGAGTCAGTATCAACAATATCACTGTCTTTCACCTTCATACCCTGTCTTACTGAAGATTTTCAGGGGCAATAA
CATGCAAGGAGCTGCCATCGTCTCTGATGACCATGCCTTCTTATGGAATACCTCTTGATATGCCTACCTGAGGCTGTTT
TACAGTTAACTATTTTTTTAATAAGTAGAAGGACCACACTCTAAAGTAATGATAAAAAGTATAGTAAACACATAAATTA
GTAACCATTATTTGTTATTGTTATCATGTATTATGTAGTACACATAATTGTGTGTGCTCTAATTTATATGAATGACAGC
ACAGTAGGTTTTTTATGCCAACATTGCTACAAACATATAAGTACTGCTTTCCATTATGACATTACTATGCCTATGGTAT
ATTAATAACTAGGCTATAGGAATTTTTCAGCTTCGTTATAATCTAATGGGACCACTGTAGTATGTGGTCCATTGTTGAC
CTAAATGTCATTATATGGCACATGATTATACTTGAAAATAATCAAAGTTATCAGATAGAGAAGGCTTAGGGATGCAGAA
CCATCTTTACAAGTTTTTGCTGCTTTGAGACAAATCCAACCCCGACTATTACCAGCTTAGAGACACCTCCTAGCTGCCT
CTAGAGATGTATATCATCTTTGATCAGGGACTGGGGACCTAAAACAGGAACAATAGCATAGCATGCTTTTATGTGCAAT
GAATTTTCAAATATTAAAAAAAACCTTCAATATTGTTGTTATATTATCTGCACAGTATTAGGAAAAATGAGTAATAACT
TATAAGTGAAAAAATACCTATGCTGCAAAAAACTCTTTTAATGTTGACTCCAGTTTCAGCAGAATAAATTTGTCTGATG
ATAGCCCCAGTGTCTACAGAAAATATACATTTTCTATTACTGGGGTTACAGTGTATGTAGAAGCACTGTGAGAAACCTT
GACATTTTGGCAGAAAAGGATTTTTAACAATAAAATTCAAGAAAAGGTCATATTAGTAGAAATTTTGGTAGTCATTTTA
AATGTCTCCCACATTATATGGCATCATAAATGCATTTAATATCAGATTGAATTATGGCTGTAATCTTTAGCCTTAGTAG
TCTGAACATCATTTCATACCTAGCTTAATATCCTGGAATGTTATGTGTGGTTTCTGCTTTATTTAAAATAGAGGAGTGA
CAAGGGTGATGAATACATTTTATTTCTGTTTTCTCATCCCATTTTCTATTGCAAATGAATTTTTTTTCAGAAGTAGGTA

Fig. 9.79

TGCCTACCTGTATCTTTGCAAAATGCATTTTCAGAAAATAGGTTTGGAATATTCATTTAAATCCTATTTCTTGTGACCC
AATGTAAACTCACTGCTGTTAAATCTAAAGTGTGTGAGTTCTTACAGCTGAGCAGTAATTCTACTGACATTTTAATGTC
ATGTCCTCTCCTTAGCAGCCTGTTTGCATATTGCATGCAGGCTACATGTTAGGATTTTTAAAACATGAGGTGTCTTGG
AAAATGATTTTGACACAACTTGTCCTCTTGGACCAACTGTATTTTATAAACATTTTAATGCTTTACTCTTGAATGATCC
ATTTCACTAAGAGTCAGAAAACTGAGTTTCTGTCATGCCATGGTGACATGATGCTGACATTGCTGAGCTAGTTACTTAT
TCCTTTTACCTAAATGTTTAATAGAACACACCCAGCCCTGTGTGGGCATGAGAGGGAAATGGGCCCAGAAGTTGCAGTG
GTTGCATTCACAAGCCATTAAGCTGTGGTCAGTTTCTCCCTAAAGCATTGTACCTCCCTTAGACAACTTCCTCTTTGGG
GAGTTGCAATATCTAGAAACTTCAGAGGAAGGGGTCCAGCTGCAGGGATATGGTTAAAAGTTTTTTCAGAGGAGCCACT
TTGCATGGCAGTGGGCCATTTCCTGCTATCACTCAGGCCCAGCCTACCCACAAGTTACAGTCTTTGGCAAGAAACAGAA
GGAAACAGTGGTGGCTCTTGGAGCCACATGCTCAATTTTTGATGGTGCTCTTTGCGCAGTGAATGCCAGCTGCTCCTCA
ATCAGGTATGCTGCTGTTGTTCTGAGAGTGATTAGGAACAAAAGGGATGATGCAGATGTGTCAGGCTATGGGAAGTGCA
AATGTATATTTTTGGAGCACTGAATGTAAAGAGATTTAGAAGTTTCCTGTTGGAAAGCAGGCTATCGAAGCAGGCAGGC
AAAATGATTTTGACACCAATACCAACCAAGGGCAAGAAGTGGAAGCTTGGAAATATACTTGTTTGGGAATAAGAAATTG
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TTTGCTACCACCTGAGTCTGTTACCATGGTCTCACTCTTGCATGAAAGCAGTCATCTCCTACCTAAGCCCCTTCTGTTC
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ACAGCTTCCCAACTCATGAGGAGTGAGATCAAATGTCTTGCCATGGCTGACATGGCATTCTTGGGCCTGGCCCTGACCT
TCTCTGTCCTTATCTTGCACCACTCTTACTGTCACTCGCTCCCTTCAGGTCCCTCTGTTTCCTTGCTGCTCTTTTATAT
GCCATCCCTCCTCAGGGCCTTTCCACCTTCATTTCTGATTAGAATATTCTTCCCCCAGATATCCGTATTACACACTTTC
TCACTCCATTATCATCTGTTCAAATAGCACTTAAAAAGAGAGGTTCTGTGGCCATGCTATCTAAAATAGCACACTCACA
TGCACCCATGACTTTCTCTCCACTTACCCTATCTTCTTCACAGCACGTAGCACCACCTGTCATATTCTATCAAGTTGAA
CCATATGAAATTGCTTTTGGGTGGATCAAGAACAGCTGAATATTGGCCATTTCATTTGGTTCAAACTAAAATATATTTA
TTAATTTGTTTATTATTTGTATTTCTTCTATACTATGATTGAAACCCTGTGGGTCAAAGGTTTTGTTTTGTTTTTGGCA
ACATCTCCAATGTCTAGAGCACAGCAGGAACTTAGACAAGTTGTATTGAATTAATGGAAAGGAAGAAGAAAAGCCATAT
AACTTGTTGACAGTAAGCAGTGAACACTTATATGAAAAATGATCTCTCTCCCTTTCTCTGTCTCTGTCTTGTGTGTGTG
TGTGAGAGAGAGGGAGAGGAGAGAGAGGAAGCACTAGAGGACTCTAGAAAAAGGTGATGGGATGGGCTTCAGAGGGAAT
CCAGAAAATTAAAGGATTTATTTGGATCCATGTAAAGTTCAGTGTAATGTTTCTAGTTGTAGCTAGGGGCTATGTATGC
ACCTATAATTATTATATATTTTTTTCCATGTGGTTTTCTGAAACTGGGACCAAGTGGGATCAAACAAGCTTTGGATAAT
ATAATTGTGAACTGAAAAAGTTTCATAATTGGTAAATTACAAGGATTCAGCTTGCCAATTGTGCTGTAAGTTGATTTTT
ACTAGAGAAAATAAGTTACTTTTTACTAACAGTTCTAGAAACATGGCTAATAATCTTACTATCATCCCTGCTACGGATG
CTTAGAAATACTGCATGTCTAATCTTGAAAGGAAATAAAATCATTACTATGGGTCAGAAGTAAAGGTTGAATTGAAAAC
TCCAGGGATAAACACTTGAATTGATACTGTGGCTGCCTTTGGGACAGTATTATTAGTCTCACTAACAAAGGGCTTGAGA
TATGAAATGGAAAATTGAGGTTCTGTGGGTTGGAACAGAGATCTTCAGTACAAAGTTGTGACCTTGGAATGGAAAGGAC
TGAAAAAAAATCATCAGAACAGAAGAGACAAGGAAGCTGTGTCTTAGAAAAAGAATGTCTCCTTCAAAAACACATCTCT
ATGGATTTGTACCTCATTTAGGTTTGGGAATTGAATTTGTACTACTTGTGTAGTATGGAAAAATCACAACTTGAAAAAT
TAACTACAGAGAGCCCAGATTACTGATACTTCTAAAGCACCTGGCAGAATCTGTTACAAACTTCTTAGGAGAAAGATAC
CATTCAACCAAGTTTCACAAGATTCCTAAACATAAATATCTTCTAAAGATTAACTCACAACCTCAAACTATAAAACATA
AGAACAAAATCCCCCACAAGTGAGAGTTAGCAAACACAAAGAGCAGGATTAGAATAAGACCTAAAAGTGATGGAACTAT
CACATAGACTATGAAAAATGAATATTGAAAATGATAGAGACATAAATGAATTATAAATATAAGAAAAAAATAAGGTTAAA
AAAAGAACACACTTTATAAAGGTGAAAACTAAAGTAATTGAAATTAATAATTTATCATAGGTTAAACAAATTAGATATA
GCTGGAGAGAAAATTAGTAGACTGTAATATAATTTGAAGAAATCAACCAGAAGGCACTGAAAAGAAAATGATAGAAGAT
ATGAAAAAGAAGTTAAGAGACATGTTGGAGAGCATAAGATTCAATATATGTTTCATAGGCCTTCTAGAAGGAGAGCACA
GGAAGATTTGGGAAGAGGCAGTATCTGACTATAATGCAATTAAATTAATAATTTAAATTAAAAGACAACAAAAAGAATC
CCACATGGATTTGAAATTAAATCAACACACGTCTAAACAACTCATGAGTCAAGCAAAAAAATAATGAAAATTAGAAAAT
ATTTAAAACTGAATGTTAATATTAATTAAATTCATCCATTAAATATTGTATGAGAAGCAATGAAAGTTATAGTTAGAAA
GTTATAGCTTTAAATGCCTATATAAGAAAATGAAAAAAGGTACAAATTAAAAAAAATTAACTTTTAATTTTTTTGGCTA
CATAGTAGATGTATATATTTATGGGGTACATGAGATATTTTGTACAGGCATGGGGTACAGGCATGCAATGTATCATAAT
CACATGGGGTGTAAATGGGGTGTCTGTCACCTCAAGCATTTATTTTTTGTGTTACAAACAATCCAATTATACTCTTTTA
GTTATTTAAAACTGTACAATTGAATTATTTTTGACTATAGTCACCCTGTTGGGCTAGCAAACCTTAGGTCTTATTCATT
CTTTCTATTTTTTTTGTACTCATTAACCATCCCCACTTCCCTCCCTCCTCCACTACCCTTACAAGCCTATGGTAACCAT
CCCTTTACCATCTATCTCCATGAGTTCAATTGTTTTAATTTTTAGCTCCCACAAATAAGTGAAAACATGCAAAGTTTGT
CTTTCTGTGTCTGGCTTATTTAACTTAACACAATGACCTCTAGTTCCATCCACACTGTTGTAAATAACAGAATCTCATT
CTTTTTAATGGTTTAATAATACTCCATTTTGTATATGTAACCCGTTTTCTTTATCCATTAATCTGCTAATGGATTGCTA
CCAATTCCTGGCTATTGTGACTAGTGCTACAATAAACACGGGAGTGTAGATATCTCTTTGATATACTGATTTCCTTTCT
TTTGGGTATATACCTAGGAGTGGGATTGCTGGGTCATATGGTAGTGCTATTTTTAATTTTTTGAGGAACCTCCAAACTG
TTCTCCACAGTGGTTGTACTAATTTACATTCCCACCAACAGCATACAAGGGTTCCATTTTCTTCACATCCTCGCCAGCA
TTTGTTGTTGCCTGTCTTTTGGATAAAAGCCATTTTAATGAGAGTGAGATGATATCTCATTGTAGTTTTGATATGCATT
TCTCAATGATGTTGAGCACCTTTTCATATATCTGTTTTCCATTTGTATGTCTTCTTTTGAGAATTTTTTACTCAACTCT
TTCACCCATTTTTAAATTAGATTATTAGATTTAATAGTGTTGTTTGTGCTCCTTATATGTTCTGGTTATTAATCCCTTA
TCAGATGGATAGTTTGCAAATATTTTCTCCCATTCTGTGGGTTTTCTCTTTGCTTTGTTGACTGTTTCCTTTACTGTGC
AGAAGCTTTTTAACTTGATGTGATCTCATTTGTCCACTTCTGTTTTGGTTGCCTGTGCTTGTGGAGCATTACTCAAGAA

Fig. 9.80

ATTTTTGCCCAGTCCAGTGTCCTGGAGAGTTTCCCCAATGTTTTCTTTCAGTAGTTTCATAGTTTGAGGTCTTAGATTT
AAGTCTTTCATCCATTTTGGTTTTGTATATGGTGAGAGATAGGGATTGGGTTTCACTCTTTTGCATATGGATATCCAGT
TTTTCCAGCACCATTTATAGAAGAAATCATCCTTTCCCTAATGTATGTTCTTGGCATTGTTGTTGAAAATGAGTTCCCT
GTAGATGTACGGATTTATTTCTAGGTTCTGTATTCTATTCCACTGGTCTATGTGTCTGCCTTTATGCCAATACCATGCT
GTTTTTGTTACTATAGCTCTATAGTATAATTTGGAAGTCAGGTAATGTGATTCCTCCAGTTTTGTTCCTTTTGATTAGG
ATAGATTTGGCTATTCTGGGCATTTTGTGATTCCATATAAATTTTAGGATTTTTTTCTATTTCTGTAAAGAATGTCAT
CAGTATTTTGATAGGGAGTGCATTGAATCTGTAGATTGCTTTGGATAGTATGGACATTTTAACAATATTCATTCTTCCA
GTCCATGAACATGGGATATCGTTCCATCTTTTTGTGTCCTCTTCAATTTCTTGCACCAGTGTTTTATAGTTTTCATTGT
AGAAATCTTTCACTTTTTTGGTTAATTTCTAGGTATTTTATTTAATTTGTAGCTATCATAAATGGTACTACTTTCTTGA
TTTCTTTTTCAGATTGTTCACTCTTGGCATTTAGAAATGCTACTAATTTTTCTATATTGATTTTGTATCCTGTAAATTT
ACTGAATTTGCTTACCAGTTCTAATATTTTTTTGAGAGAGTCTTTAGGTTTTTCCAAATATGAGATCATATCATCTGCA
AACAAGGGTAATTTGACTCCTTCCTTTCTAATTCGGATACCCTGTGTTTTTTTCTCTTGTCTTACTGATCTAGCTAGGA
CTTTCAGTACCATGCTGAGTAACAGTGGTAAAAATGGGCTTCCTTATCATGTTCCTGATCTTAGAGAAAAGGCTTTCAG
TGTTTCTTCCTTTAGTGTGATACTAGGTATATGTCTTTTGTATATGGCTTTATTGTGTTGAGGTATGTTCCTTCTATAC
ATAGGTTTTTGAGGATTTTTACCATAAAGGGATGTGAAATTTTATCAAATGCTTTTTCAGCATCAATTGAAATGGTTTT
TGTTCTTCATTCTGTTGATATGATCTATCACATTGATTGAGTTGCACATGTTGAACTATCCTTGCTTCCCTGGGATAAA
CCCCACTTGGTCATGAGGAATTATATTTTTAATGTGTTGTTGAATTTGGTTTGTTAGTATTTTGTTGAGGATTTTTGTA
TCAATATTCATCAGTGATATTGGCCTGCAGTTTTCTTTTCTTGATGTGTCTTTGTCTGGTTTTGGTATCAGGGTAATAC
TGGCATCGTAGAATGAGTTTGGAAGTATTTCCTCCTCTATTTTTCAAAATAGTAACATTGTTATTAGTTCTTCTTTAAA
TGCCTGGTAGAATTCAGCAGTGAAGCCATCAGGTACACAGCCTTTCTTTACTGCGAGATTTCTTTATTATAGTTTTGAT
CTTGTTGCTTATTATTGGTCTGTTCAGGGTTTGGATTTGTTCCTGGTTCAGCCATTGTAGGTTGTATGTGTCTAGGAAT
TTGTTCATTTATTCCAGATTTTTTAATTTACTGGGATTTAGTTGCTCATAGTAGCCACTAACGATCCTTTGAATTTCTA
CAGTCTCAGTTGTAATGTCTCCCTTTTCATCTCTATTTTATTTATTTGTGTCTTCTCTCTTTTTTCTTAATCTGGCTAA
AGGTTAATCTATTTTGTCTTTTCAAGAAGCAAACTTTTTAATGGATCTTTTGTATTTTCCTTGTTTCAATTTCATTTAT
TTCTGCTCTGAACTTTATTATTTTTTCTTCTACTAGTTTTGGGTTTGGTTTGCTCTTGCTTTCCTTTCCTAGTTCTTTA
AGACACACTATTGGGTTTTTTTATTTGAAGTTTTAATTCTTTTTTGATGTGGGCACTTAAAACTATAAGTTTCCCTTTT
AGTACTGCTTTTGCTGTATCCCATAGGTTTTGGTATGTTGTGTTTCCATTATCATTTGTTTCAAGAAATTTTATAATTT
CCCTCTTAATTTCTTCATGACCCGTTGGTCATTCAGGAGCATATTGTTTAATTTCTATGTGTCTGTTTAGTTTCCAAAA
TTCCTCTTGTTTTAATTTCTAGTTTTCTTCCATTGTGGTTGGAGGAGATAGTTGATATTATTTCAAATTTTTTGAATGT
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CCTGAGGTCTGTTTCTTTATCTCTAATAATATTTGCTTTTTATATCTGGGTGCTCCAATATTGGTTACACCTATTTATA
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TGAAGTCTATTTTGTCTAAGTATAGCTACTCCTGCTCTTTTTGTTTCCATTGGCATGGAATATCTTTTTCCACCCTTTT
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TGAAAAGTCTGCTGACAGACATATTGGAGCTCCATTGTGTTATGTGTTTCTTTTCTCTTGCTGCTTTTAGGATTATTTC
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AATTTTCTTATACTTGGATATTGATACTCTTTTCTAGGTTTGGGAAGTTCTTTGTTATGATCCCTTTGAATAAACTTTC
TACCTCCTCTTCATGGCCAATAACTCTAAGATCTGCCCTTTTGAGGCTATTTTCTAGATCTTGTAGGCATGCTTTATTC
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AATTCTGCTATTAAGAGACTCCAGCTGGGCACAGCACTTTGGGAGGCCAAGGCGGACAGATCACCTGAGTTCAGGAGTT
TGAGACCAGCCTGGCCAACATGGTGAAACCACGTCTCTACTAAAAATACAAAAATTAGCCAAGTGTGGTGGCGTGTGCC
TGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGAGAATTGCTTGAACCCTGGAGGCAGAGGTGGCAGTGAGCTGAGATC
ACACCACTACCCTCCAGCCTGGGTGACAGAGTAAGACTGCATCTGAAAAAAAAAAAAAAAAAAAAAGAGAGAGAGAGAGA
GAGACTCTGATGTATTCTTCAGTATATCAATTGCATTTTTCAACTCCAGAATTTCTATTTGATTCTTGTTAATTATTTC
AATCTTTTTGTGAAATTTATCTGATATTATTCTAAATTCCTTCTTTGTATTATCTTGAATTTCTTTGGGTTGACTCAAA
ACAGTTATTTTGAATTCTCTGTCTGAAAGGTCACATATATCTGTTTCCCAGGTTTGGTTTCTCATGCCTTAATTAGATT
GTTTGGTGAGGTCATGTTTTGCTGGATGGTCTTAATGCTCGTTGATGTTTGTCAGTGTCTGGACATTGAAGAGTTAGGT
ATTGTCATCTTCACAGTCTGGGATTCTTCATACCCATTCTTCTTGGGAAGACTTTCCAGGTATTCAAAAGTACTTGGGT
ATTATGATCTAAGCCATATCTGCATCGGGGGTACCACAAACCTAGTAATGCTGTGGTTCTTGCAGAATCATAGAGGTAC
TGCCTTGGTATTCTTGCATAAGATCCAGAAGAATCATCTGGATTACCAGGGAGAGATTATTGTTCTCTTCCGTTACTTT
CTCCCAAACACAGAATCTCTCTCTATGTTGAGCTAACCACCTAGGGCTAGGGGTGGGGTGACAGAAGCGTGCCTGTTGC
ACTGAGACTGCGTTGGGTCAGACTTGAAGCCAGCATAGCACTGGGTCTTGTCCAAGGCCTGCTGTAACCACTATCTGGC
AAGGCCCTAGATACCTGGCCGTACTTAAGGTACTGTTCACTTAAGGCCCAAGGACTCTTCAGTCAGCTTGTGGTGAATG
CAGCCAAGTCTGAGACTCATCCCTTCTGGCTCAGGGCAGGTCCAGAAATGCCATTCAAGAGTCAAGCCTTGGAACTGGG
GACCCCAAGAGTCTGCTTGTTGCCCTAACCCACCATAGCTGAGCTGGTACCTGATTTTTGGTTCTTCTGAAGGTGTGAT
TTTTGCCTAGATAGTTGTTACATTTGGTGTTCCTGTGGGGTGGGGGGACAATCAGTGGGGCCTTCTATTCCACCATCTT
GCTCCCAAAGGAGTAAATATTATTAATAATAAGATCAGCATCCAATTCAAGAACTTAGAGAGTAGGCAAAGCAAATATA
AAGTATAATAAAAGAAAAATGTGTGTATTAATAATATATAAAACAAAACTGAAAGCCCTGAAAAGACTAATAAATAGGT

Fig. 9.81

TAACATGGCATGTTTGAGTAAGGAAACCACTGGAAACATTACAGCTACTAGTATATTGGAAATAATCCCTGTACATCTG
GAACAAGAGAAGAATGACTTCGGGTTCTGCTTATGTTTAATTGGTTGTTCTAGCCAGCATTGTAGGTAAAAGAAATAAA
TAAAAGGTAGATAGAAAAGAGAGAAACCTAATTGTTATTAGTAAAGAGACTTCATTGAAAAACTATTAGAAAATAATAC
AAAAGTTCAGGAAAATTGCTAGATATAAAGTAAACCACCTTTGTGTAACCCAGCAAAAGACAATTAGAAAATTCTGTAA
ACTACCTTTGTGTAACCCAGCAAAAGACAATTAGAAAATTCAGTTTAAAAGCAGATACCATGAATACAGCAAAAATTAG
AAACATGTAGTAATAAATCTAACAAAGGATTTTTAGAAATCTTTACAAATAAAATTACAAAATTTTAAGGTAAGACACA
AAGAAGATGATAAATAGAAAGATATACTATACTTAAAGCAGAATGACTCAGTATCAGAAAGATTTCAATTCTTTCTGTA
TTCATTTATAAATTCTAATAAGAGCTCACACAAGAGTGGTTTTGTTGGTTGTTTTCAGGAACTTGACAATCTGATCAAT
CTGATTCCAAAATGTATACAAAGAGCTAAGCGTCAGTCATAACCAACACAATTTTGAAGAAGTCGGGAAGATTAGCCCT
ACCACATGTCAACAGCTACTGTAAAAGTATAGTGATTAAGACATTGGGATATTGGAGCAGCAATAAATAAATATACTAG
GTTTAGAAATAGACTCATGTGTCCCTAAGGATGTATTACAAATCAGTGTGGTAAGGATACAATAAATGATGCTAGGAGA
TATAATTATTCACATGGGGAAATAAAATAATAAGTACCCTTTCTTACAACATATAATAATTAAATCCCATGTGGAATGT
AGGTGTAAAGGTGAAAAGAATAGTAAAGATTTTATGTTTTTAGAAGAAAATGTATGAAATATCTTTGTGGCCAGTGGG
CAGGGAAGGATTTCTTAAGACTAAAACCCATTTACGCCTAGTGTTCCATTATTGGAATGCTAAGCATGTGAGAGTTATT
TATTATCCTACTGCTCAAGATCATCGCCAAGGCCTGATTGCAAAAATTCAAAAAAATTGCAACCTCAGGCATAAGTGGG
TTAAAAGACAAACTATAAAGAAAAATAATAATAGGTTGAATATATTAAAACAAACATTTTTGAATAGCAAATAACACCA
ACAACATTTTTAAAAAACTTCAGAATAGGAGATATTTATAGTATATACAACCAACAAAAATTAATATGCATTTTGTATG
AAGGAATCTTTCAAATAAATATTTAAAAATTCAATCCAATGGAAAAATAGGTGAAAGATATGAACAAACAATCGACAGA
AAAAAATGGCTGATAAACACACAAATATTTGCTTTAGCTCACTAGTAATCAAGTAAATGCAAATTAAAAAAAGGAAAAT
TTTATTTCATACCAACCAGTTTTAAGAATTAAAGTGTGAAAGTGCCAAATAAGAATAAATTGGTAAAACCAATTGGAAA
AGTCAGTTTGACTTTACTTAGTAAAGTTAAACATTTGCATATCTTGAAGGAGGAATTCCACTTCTAGGCATATATCTAG
AAACATGATTGGATGTGTTTGCCAGGGGACATGCACAAGGATGTTTATTCTAGCATTATTTTGAAATAGCATGATACTC
AAAAATAAAATTCTGTATTTCTATCAACAGAAGAAAGTACAAATAAAAACTGGGATATTTGTGCAATGGACTTACAGCA
TAGTAGATGAAATGTATAAATTCCATGAGATACATTAACATGGGTAATGTTAATAAATTTAATAAACAACATAATAGCA
ACATAAATTTAAGCAAAAACAAAAACAACTTGCAGAGGGATTAATATTATTTGATGCCATTTCTAGGAAGTTTTAGGAC
ATTCAAAACAATATTTTATGTTTTTAAAGAATACATCCATAGGCAGTAAAATAATTAAAAGAGGGTGGAAATCCTAAAC
ACCAATTGTAGGATTTTTCTGTGAAGGGAGGTAGGGAAGGAGGTAAATGGGCTCAGAGAGGGAAGGATACACTGGGCTT
TCAAATCTAACGGAATTGTTTGTTTTTTTCCCCAACATTTTATTTGATAATAATTAAAGATTCATAGGAAGTTGCAAAA
ATTGTACAGATATGTCCTGTGTACCATTCACCCAGTTTCCCCCAATGATTATGCCTTGCATTACTATAGTTATTATAGT
CATGAATTTGACATTGATCTCATGTGTTTGTGTAGCTCTATGTCATTTTGTTACATGTGTAGATTTGTGTAATCACCAC
TTCAATCAAGATTCAGAACAGCCCCAATCACTACAATGATCTCCCTTGTGCTATGCTTTTATAGTCACAGCCACACTCC
TTTGCCACCATATCTAATCCCTGGTAACCACCTAATATGTTCTTCATCTCTATAAAATATTGTCTTTTTGAGACTGTTA
TATAAATTAAACCATATAGTGTGACTTTTTGAAATTGGCTCTTTTTCTACACAGCATAATGTCTTTGATCCTTGAGATC
CTCCAAGCTGTTGTATGAATCTGTAATCCATTCCTTTTTATTGCTGAGTAGTATTCCATGATATGGATGTAACAGTTTT
TAAACTATTCACCTATTGTGGGACATTTTAGTCTTTTCAATTTTTGGCTACTACAAACAACTGCATATAAGTTTTGCTG
CGATCATAATTCTTTTTCTCTGGGATAAATGCTTCAGAGTGAATTATGGGGTCATATGGTAAATGCATATTTAGTTTTT
AAAGAAAATTAAAGCTATTTTCCAGAGTTTTCAAACTATTTTCCAGAGTTGCTGTACCATTTTATGGTACAGCCATATG
TTGTTGTTCCCTTAATGACATGTGAGAGATCCAGTTCTCTCCATCTTTGTAAGCATTTGGTATTGTCACTGTATTTTAT
TTTAGCAGTTCAAAGAGGTGTGTAGTGATGTCTTATCATAGTCTTAATTTGCATTTCTCTGATGGATAATGTACTAGTT
TTCTATTGATGCTGTAACAAATAACTGTAAACTTAGTGGCTTAAAACAACATAAACTTACGATTTTACAGTTCTGTAGG
TCAGAAGTCTAACACAGTTTTCACCAGACTGAAATCAAAGTGTTGGTATTCCTTTCTGCAGGTTGTAAGGGAGAATTTG
TTTCCTCATCTTGTCTAACTCCTAGGCTCTACTCATATTCCTCGGCTCATGGCTCCCCTTCCTCTGTCTTCAAATCCAG
CATTTGTGGGTTCAGTCCTCATATCATATCATTCTTACCTCTTCTGCCTGGGTCTTCCACTTTTCAGAACCCCTGTGAT
TAAAGTAGCCCCAACCAAATAATCTGAAATAATGGCTGTATTTTAAGGTCAGCTAATTGGCAATCTTAATTCCATCTGC
AACCACAGCCCCCTTTGCCATGCCAGAATAACTGGTTCTGAGGATTGGGTGTAGACATTTTTAGGGAGCCATTGTTCTG
CCTATCATAGGTAGATATGTTGAACATCTTTTCATGTGCTTATTTGCCATCCATATGTCTTCTTCAGTAAAATGTCTAT
GTCTTTTTGCCATTTTCAAATTGGATTGTTTGTTTTATTAGTATTGAGTTTTGAGGGTTTAAATTTTTTTTGTTGTAGA
TATAAGTCCTCTATAATATTTGTTTTACAAATATTTTCTTTCAGTCTATAGCTTGTCTTTTCAATCCCTTAGCAGGGGC
CATTCACAAAACAAAAGTTTTTAATTTTGATGAAGTCCAATTCATTGATTTTTAAAAGTAAATTATGCTTTTGTTGTCA
TTCTGTATAAGAACTCATCACCAAGCACTAAGTCCTAACATTTTTCTCCTGTCTTCTAGAAGTTTTATAGTTTTATATT
TAATTCTACCACCCATTTCGAGTAATTTTTGTATAAATAGTGAGGTGCAAGTTGAGATTTATTTTATCTATTTAATTTG
TCTGTGAATGTCTGTATGCATTGCTCCAGCACCACTTGCTGAAAAGACTATCCTTTCTCTACAGAACTGCTTTTCCACT
GATGTTAAAAATAAATTGGCTGTATTTGTGTGGGGATGAATTGTTTCATTCCTTAATGAAAAGAGGAAATACAATAAAC
TATTAAAGTCTAATAAGGCTAAGGGCATAGTCATGTGTTGTTTTTTATATTTTTCTGTTATATTGAAATATTTTAAAAT
CAATAACGTAATAAGGAGGCATTTGCACCCTCAAACTCTGAAAATATTAAGAAAGTGGGTAATGCTATAGTGAGATGTT
GATCACAGTGGATTGGAGACTAATAGCTGTATGATATTGATAAGGTTACTGGCCTCTCTGGGCTTCAGTTTTATTTTTT
TTTTGTGAACTGAGAGGGCTGAACTAGGAGACCCCTGGAGTCTTTTGACATTTGCATGCTCACATAGTATGTGATGCTT
CTCATTGTTGAGTTTAGAGTAAGAGATGTGGAGCGGGATCTAGGCTGTCATTCTGGTTTACAGCCTAAAGATGAGACAC
TGTTTATATTTCCAGGTAGAGGCTGCCTAATTAACTACAGGTTCATAGTGGTTGGGAGCAAGCCCTCTTTTTCAAACTA
CTTCGGGAGGTTTTATTATACCTGTAATAATCATTATACTATAGAAGATATCATTGTAGTTTCTTATAAATACCTCACA
CACTTCTTCTGGATTTCATAATGGGGTCACTATATGATGCTTCTTGGGATCTGATTTACAATTTATAAATAAGTCTGAA

Fig. 9.82

ATATAAATAAGAAAATACAATGTATAAGAGTCCTAGAGGTTTAGTCAGCAGAATTCCAAATAGGAGTTTAACCCTCTAA
GGAGCACTTACAGTCTTCTTAGAAATAAACACATTGTAAAATGATTATGAGAAAATATTTATCATACACATTTTAATTG
ATAATTTAGCTGTTATATTTTAATTAGAAAAGAGTTTCTGATTTTCTTTATGGCTATGACTTTAAGCCTGTTATCTAGA
ACACAGTTTATATTTTCTGGTTTCATCATGACAGAAGGCATTTTGAGAAGGGCTAGAGCAAGAAATTAGCAACAGGACG
TCAATTTCGTCTTCTTTGTTTACTTCTTCTGGCTAGTAGCAGAATTTTTTTCTATCAGTAATTTTGGCATCAATAAAAT
AATAAAGGATTACAAACTTCATCCATCATATGCCAACAAATTTGATAACTTACATGAAATGTACAAATTTCTGGAAAGA
TAGAAACTACCAAAAATGACCCAATAAGAAGTAGAAATTCCAAATAGACCTACAACAAGTAAACAGATTGAATTACTAA
TTTTAAAATTTCCCACAAAGAAAGTCCCAGGCCCAAATGGCTTTACTCGTGCATTCTAACAAAAATTTAAATAAGAATG
ACCACAAATCCTTCACAAGTTCCTTCCAGAAAGAGAGAAATTGGAATTTTCATTCATTGTTGGTGGTAATATAAAATAG
CGCAGTCTCTTTGGAAAGCTATTTGGCAGTTTCTGAAAACATTAATTCTAGAGCTGCATATGACCCAGCAGTTTTTGTA
CTCCCTAGTATATATCCAAGAGAAATACCATATATCTACAAGAAAACTTTTACCCAAATGATCATAGTAGCATTATTTA
TAATAGCAGAAAATAGAAACAACCCAAATGCCTATCAACAAGTGAGGTGACAATCAAAATGTGATATATCCATACGGTG
AGGTATTATTGAGAAATAAAAAGAAATAAAGTATTGATATATGCTACAACATGGATGAACCTTGAAAATATTATGCTTA
GTAAAGGAAGCAAGTCACAAAAGACTACTTCTTGTATGACTCAATTTATATGAAGTGTCCAGAATAGACAAATCTATGA
AAGTTGATTAGTGTCTTCCGACAGCTGGGAGGTTTGGGACAAGAGGGAGTGATTGTTAATGGACCTGTTGTTTTAAATG
TTATTGATTTGATTGTGTTGATGGTTGCATAACTTTGAATATTGTAGAAACGACTGAATTGTACACTTCAAATGGTATG
TGAATTATATCTCAAGAAAACTGTTTTTTAAAAGTAATGTGAATATGTATGTTGAGATAGCATGGTATGTAGAAGTTAT
GCAGGGGAGTGGTTAAGATCATCAACTTGGGTCAGAGTGCCTAAGGTCAACCTCACCATAACAGTTGTGGGAACTTACA
GCTTTCTTAATTTCTCTGTGTCTCAGTTTCCTCACCTGTAAGCATAATAATAGTGCCTTTATCATGGTGTCATCTTTAA
CATTAAATGAGCTAATATTTGAAAAGCATTTAAAACAGTATGTGGCACAACATAAGCACTATATAAGTGTTTGAGAAAT
AAATAAATATAGGAAGACTACAATATTTGTTTCTTGGAAAATTACCTTTTATTTCAAGAGTTTGATCTTCCTATTCTAT
TATGTTAAAATTTCCCTTTGTAAAAAAAAAAAAGGAAATGTTAGTTACAGTAGATGGCAGTTATTTTGTAATATCTTTAA
TTTGCTAAAGGAACAGTTGGCACTTCTATATTGATCTCAAAGTAATTTTAAAAATATTTTTTGAAATTGTACTTTTCCA
TGAAATCTTAAATTAGAGAACCACAGTTCTATAACTATGTCTTTGTTCAGTGGCCTTTGGAACCAGATGGCTCAAAAAA
TTAATAACCATTCAAGTTTTAACATTAGAAGAGTATTACAGATATTCAGCTACCTAGAAAAAATACTTATCATATAGGAG
ATGTTAATGAATGTGCATTGGAATGAATGACAAGAATGGATCATAAGTGTGTGACTTGCTCAGTGTGTGTGTGTGTGTG
TGTATGTGTGTGTGTGTGTGACAACGACCTCTTTCTACTGGTATCCTAAAGTCTGTATAGTTATATCTGATATGCTTGA
GTTTGCATGTTTCTGCTAACCTTATTCCCATGAGATTTCACTTTGAGGTATTTATATGGATTCTAATCTTGCAGCTAAG
TTTTAGAATCCAATCCTCAAAGTATTAAGGGATAATTGGGATTATTTAATACCCCTCCCCAATTTTTCTGTAATGTTTT
CTATTAGTAGTATGGCTGCTGCTATGTTTGCATGTGTTCACTATTTTTATTTCCAATTTCTATTACATTTTTATTTTTC
TTCCTAGTTTCTGCAGACTATTTAAATAATTTTATTTGGTCTGTCTCACCCTCTGTGTTGGCACTTTTAATATCTTTAA
GAGAAACTTGAAAATATTTTAGCTCCATAGAGCACGTTTCAGTTTACCTTTTGTATTCCATAGCCTGGATGTAAGGCTT
CTTTATGTTTTGTGAACAGTTAGAACCACACTGACTGCTATGAAAATGCTTAGTAATAATTATGCTTCCTGGATCCTTG
TGAAATAACCTGCTTTACTCAATTTAGTACACAAGTTATTGAGAAACATCTATAGCCTTTTTCATTGCAGTGTGGGACA
GTAGTTCAGTGCATAGGATCTGAGGCGCTGTCACATCTTTCTTGATGTCTCAAAAACATACCATTGATTTTGCTTCCCA
AGTCTAGATTTACCAACATGTGAGAGACTGATGCTGCAGTGCCAGGAGAATTATTACTGATCATAATCCAAGAAGAACT
GACCAGAGAATTAAAGCATTTAAAGTTGCAAGAAGTAGGTTTATTCCTTGACTCAAAAAGGCTTAGTATAACCTACTTG
CACCCCTGTAAGCATCTAAATTATTGTCTTAAGAGAACAGAACCATAATGATAACCACAGTATTGCTTAATATCTGCTG
CTGTTTTAAAGCATTTCCCACAGTATTTCATTGTGTCTTAATGTTACTAAACTTTATATTGCAATTGCTTAGAACTGCT
TTAATTGAAGCAATTTAAATTTACATATCCTACTGAGCCACTTTGTGTGTGAAGCACTAACATGTGATAGTGGTTCTTT
TTTATAGATTACAAAGTTACAAACAGTTGGTTGTAGATCTTATCTGTGAAAATAAAAAGCCTTGAACAAGGCTAATGAG
AATGATTAGAGGGAATTTATTAAAAAATTGACTAAGGCGGTCCCCCTCCCTCTATACTATGTCAGCTCACAGCGGGATG
TCTCCAACATTTATTGTCTGTTTAACTCATTTTTGGCATACAACTATTATGCAACTGTTTCAAATATTAATAGCTCCTC
TCCACAGCTAAACTGTGATCTTGATTTTATACCAGCCCTAATAGTGTCAAGGACAGAGGTGACAACATCTTAGGAGCTC
AAGACGAAGAATTTGAGGTCATTGTCCTGAGAGGTCATGTTTAGTTACATAGCAGGGAATGGTTATATAGGATTACAAC
TGTCTTATTTGAATAATTTACTGCAGCCCTTTGAATGTGTATTTTTTTCATAGAATTTTCAGTTACTTTGTCTCTTTGA
GATGTTCCCGTGTATTGTTCAAGGCATGGATTTTTATTGGACATACTGGTTGCAAGTGATGATAATCCAACTTAAATGG
ATCCTATCATTGAAAATTCTAGGGTTAGATCTGGATCCCAGGCTAGAAAAATATCATTAAGATCATTTTTTTTTCCATT
GCACAGCTCAGTTTTTCTCTTTATTGGCTTCATTCAAGTAGACTTTACTCCTACAACCCTGTCACCAACATAAATAATT
TGCCACAAAGTTTATATCTTATTGTTTCAGCAACCTCAATAGAACAATAGCTTCTCTATTTGTTTTAAATAAAAGTCTC
AGGATTGCATCTCACAAGACTGATGCAGGTCATATGACCCCAATTGAACTAATCACTATAGCTAGGACAGTGTCGTGCA
CCAAGACTGCCTGAGATGAGAGATGAGAAGTGTGGATTCACCAAGGAAGATCATGCTGTCACTATCAGAAAATGGAAGA
ATGAATCTGTTCTCCCCACCCAACAAAAATACATAGTTTTAATTTCTTTCTACTTTATGAAGTATTCCCAATTATATTT
CTTTTTCTTTTATGCGTGAACACACATTTTCTTTCCTCTGTAACAAACTTCTACCTTTAACATTCCCCAGGTCATCACT
GCATTCTCCATGTGAACAGTAAGAATAATGAGAGATCAGCGAAGAAAGCAAACCTTAACCCCTGTTCCTGCCAGAACTA
AGGGTTTCAACTGACATCTTCTAGAGTTTATGCCAAAGCCTACCTATTTCTGATGGATGATGTTTAAATTTCCATTGCA
TCCTAAGCTCCACTTCACTTTAGGCTGCCAAATGATTTTAGAAAACTCCTCAATGAAGATTGTGTAAACAAAATAGTGG
TTGAGACCTTTACTTATGTCATCATATTCATTTAGTCTAGCACTTTTCCTCTATCATTGACTCAAAGTTCTCTTTAGCC
AAACATCATTGTGTCAAAGATCATGGAATACTTTTGTAATATTGAAAGAAGGCCCAGCTTCTCCTTTCCTAAAAGTGTT
ATGTCAACCTCAGTTAAAATCAGTAGTCCACAGTTGTTTTTGCCAAAACAAGAATGAATTACATTGGTGGTGAAAGTCC
CTCTTCTAGTGGCAGAGAGAGAATCTAGAATAATTCACCCACTCGGGATATGGGTGGTTTGCAAGGAATGAAAAATCCA

Fig. 9.83

ACTAGAATAAGTTTCCACTTTGCAAAGGACATCACATTTGCCCACTTTTGTCTAGGTAGCAGTGTTCAAGAATGGGGAC
TTGTTTTTTCTTCAGAACCTCTAGTCTAGTAATTTTATTGAATGATTTCTTCAAAAACTCCACTATTTCAAAATAATTA
AAAACTCATTTGAAAATCAATAAAGCCCTCAAGATGTTTTTAAAGAGTTTCTAGATTCACATTTTAGTTTCTCACTTTA
AAATCATTGTTTTTTAAAATTGAATTTAAGCCTTTCATAATTTATTGCTAATTGAAAACAAAATCAACAATAAGCATAA
AATCCCAGTTGTAATCCAGCACAGCCTCCCAGATGCTTGTTGCCCTATTTTGATGTGTCCTTTCTTTTGAAGAGCTTGG
GTGTTATGTGGTCAGCACTATCCAAACAATTAATGTGATTGAGTGAAAATGCCCCTTCAGCAGAAATAGTTTCTTCTGT
GAGGAGGCTAAACTGCCATTAGAATGAAGAAGAGTTATGTAAGACTATTTTTTATCCAAACTGATTGGGCTGAATTCCA
GATTTCTCTAATGAAACCTTGCTGAATAACTGCTATGCTTGCAGCTGTGGAAGTATTCAAAATCAAGTGCTGATTCTTG
CCAATTGATCTACTACTTCTAAACTGCAGTTCTAAAAGCTAAACCCAAGTGATTGTTCAAAGAAACTGATTGTACAGGA
ATTTACTTTTGATGATAGTAAGTGGGCCAGAATCTAGGACATGAACATATCAGTTGTTATGACAACTGTTGAAGGAGAC
CTGTCTTGATAGCATGGAGTTTTCCATTGGCATTTGGCAAATAATACCATCCTTCAGAACTCAGGAGACCATTTACAAA
TTAAGGATGATGATACTTATATTTTCCTAGCTTCTCTGAAATATTCTGAAAACTAGTTCAAGATTTAAATATTTTTCTT
TTATTCTTTAGCGTAAAAAACTTTAGCAATCTTTAAGAACATTGTGATCAAGCATCTTAGGCTAATCTCAGGATAAAAC
ATTGTGACTGACAAAAACAATGCTTTATAAGAAAAATAGATATGTTAACCTTGTGAGAGGAATGACTTGATCTTGTGGT
TGTCGTTTTAAAATGCAAATAATACATCATAAGCTGAAAACATAATACTGGCTAAAGATTGCTCTTAAAAGAGGACCAA
AGTTCTGAAGTGAATATATTGAAGTGCCAGGATGTTTATTTTTTATGAATGGTGAGCCACATATACTTCTACTATTAAA
TTATAGTCTTACAGTGTCTCAAAATTTTCAGCTTTCCAATGCTTGGCTTCTTATTACGTGCAGAAAGAAGAGAATATTG
ATATTTCAAAATCTAGATGTATCAGCAGACTTATATTGAAATTGTTTTAAATTGATCCCTAACTATTCTTAGTTCCCAG
CCGTTACCTTATATATTGCTGCATAACAAATGCCCTAAAATTTAATGGCTTAAAACCATAGCCATTCTCACTATTTGTC
ATGATTCTTTAATCTGACATGGGCCCAGCTGGGTAGTTTTGTGGCTGGCAGTCACTCACGGCTGTATTTAGCAGGCAGG
TTTGCAGTGAGCTGGAGCTAGGCTCAGTTGGGATGCTGGGATGACTTCTCGCTCTCTGTATAGTTTCTGGCCCTCTCTC
TTTTCACATAGTCATTCCATGTGGCTTTTTGTTTTTTTGTTTTTTGTTTTTTGTTTTTTTTGGTAGTTTAGCTTCTTAC
ACAGCAGCTCAGGGTACCCAAAAATACAAAAATAAAAATTTCCAGGCCTTCTTAATCCTTAAACCCAGAATTGGCACAG
CTTGCTTTTGCAGCATTCTATTTATTGGTTAAAGGAAGTCACAGTGCCAACCCAGATTCAAGGAGAGAGGAGGATACAA
GGATGTGAATGCTGGGAAGCACAGCTCATTGGGGGGCACCCAAGTAATCATCTCCTGCATGATCATTTATTGATTCATT
CAAATGGCATGTGATATTTCTCTGTTCATTATGAGAAATACTAGTTACCCATATACTCTGTTGTGTCGTGGATAGATGG
ATTTAGTTAGACCTAGTTCCTATTAGTAGGGCTTTGCATAGCCTTTGCTAATCTCTGAAAAATATCTTCTGTATATCAA
GCAGACATGACCTTGATTTGCAGAGGTGACAGTTTATGAGGAGAGGCAGATATAATCAAATAACTAAATAAATATATGT
GTTCATGTGTGTGTTTATAGTTATAAACTATATTATAAATGGTAGAGGGAAAGTATAGGGTGCCACGAGAGTACATGAA
TATTAGGAAAGGGAAGTCAGGATAATATTCCCTGAGAAAGAGATGTGTGTTTGAATTATTTAAAGGGCAAGGAGAGTAG
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AGGGGAGAAGGGTGTTTGAGGAAATGAATGTAGACAATGTGATTATAGTGCAGGAAGTTAGGGAAAAAGTGATGTGACG
TGCGACTGCAATGAAAAAATGGGAGCCAGAGCACATAGGGACTTACTGGCTATGATAAGAATTTGTAAGAACAATAGAA
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TTTGTGTGGAGAACCAATTTAAGAGGCCAAGAGTGAATGTGCAAAGACTAATTAGGAGGTTTTTACAAAAGTAAAACCC
TTCCTTCCTTCTTTCCTTCGTTCCTTCCTCCCTCCCTCCCTCCCTCCTTCCCTTTCCTCCCTCCCTCCCTCTCTCCCCC
TTCCTCCTTTCCTCTCCTCCTCCCTTCCCTCCCTTCTACCCTTCCTCTCCTCCTCCCTTCCCTCCCTTCTACCCTTATT
TCCCTCTTTCCTATCACACAATCATTTGTTCAATATATACTTCTGGAATGCTGCTGTAGCCAGGGACTCATCCGGGTGC
TAAGGATCTATCAATGAACAAAACAAAGTCCCTGACCTCATGGAACTTACATTCTGGGAATCGTATGAAATATTTCTCA
CTATCCTTTTTACATACAGTCAGTTCTCTAATCTTTATATTTTATGCACAACTGAAAGGGAAAGGGTACTAATAATTAC
CAAATGCCAATCATATATTAGGCATATCCACCTATGTTATGTTATTTAATAACTAATGGCTTACTGTGATTCTGACTGT
CCCATTTAAATTCTGATTGTAGAAACATATTTTGTTTTTGTGACTGATTGGGGAAACTTTAAATATTCAAGAAGTTAGG
TATAATTATGTGTTTATGCACTATGTGCATATGTGTGTATGTGTATCTATCTATATATCTATCTGTTTGTATATTTTTC
CCTCTGTCAAAAAATAGGTGGTTTGTTCAAAGACTGATTGGAAATTATTTTAATATAGACTGAAGATGACAGACTCATC
TTCAAGGTTAGAATTTGGGATGGCGAGGTTAGAATTAATCAAGATTATGGGTTGGGATGGTGAAGTTAGTTTAATACCA
TTTAAAATATTAATATCCAGGTGGTGTGTGTGTGTGTGTGTGTGTGTGATGTGTAGAAATTAACAAAGACACCTGAGTAAA
GAAGGATGGCTTGGGACTGGAAGTGTCAGATGGCATTGATGACAAAGAGTTTGGGGAAAAAATGAGAACAGAAGAAGAAA
CCAGTACCACTCTTGAAACCACATTCCAGTTTAGGGTAGCCTTAACTCTTGTTTCTTCTGATTCCAGCCTGCTTTCTTT
TAGCTTTTGCCTACAGTTGACCTTCCTTGCAGCATTAAAAGAAAGAGGTTGTTAAAAATGCACTTAAAAAATAACGCTG
TTTTTCAAATAAAAAATTAAATGTCTGCATTTCAAGGCATCTTTTCTACATTTATAAAACTATCTGGAGTCAAGGCACA
TGCATTAAGGCTTACATTATTTTTGTGAAGGTTCATTCCAACTGGGTTTTTTCTTTGGTTCTCTGGGGCACCCTGTTTG
ATTTATTTGAGCAGCTGTGATTTAGGATTGATTGTCACTGTAATATTATAGTTCTAATCTCTTGAAGTCTAGTACTTTG
TTTTTATAGTTCACAACTGGGAATTAGGAAGTTAACCTCAGCTGTCACCATATGTGACATGGATATAAAGAAAGATTTC
TTAGCACAGTCACTTTAAAGAACCCTTTTCATGTCAATAAGAAGCACTTAATGGTCAATTTACAGGTTGTTACTTTCCT
TTCAAGAAATATCCAAATACTTTGATTTATTAAAATATTTTTGAGGTTTATATTCAAATAACAAAGTTGACAGGATTTA
GACTATTGTACCTTTATATATCCATTATATTCTCTAGGTTTGCTATTATGCTTTTTGTTCTAGCTATATTTAACCTGCA
TATCCATATACTTATTGATTTAATATTTTGTTACAGTTTCAAAACAAAAATTAATGTGTCAGTAGCCCAGTCGTTAGGA
GCATGAACTCTAAAATGAGATTACCAAGGTATAAATTCTGATTCTGTCACTATGTGACCTTCTCCAAGTTGCTTAATCA
TTCTGTGCCTCAGTTTTTCTATCTGTAAAATATAAATAGTAATATGATCTATCTCATAAGATTTTTATTCTATTTAAAT
GAGGTAATATATGTACTGTACAGCACTTAGTAGAGTGTTAGGTACCCATTAAACAAAAGGTAGCTTTTAGTTACCATTA
TTATAAAGTGGAACCCCAGAGAGTTCCCATGTTAGAATTCAGCAAAGTGAGGAGTTGGGTTCTCAGCTTTGCAGGTTGA

Fig. 9.84

GCAATTCAGTTTTATCAGTGATCCCAGATTTAATCATCTCACAGTCTCTCAGATGATTGAACAAATGAACCTAATAGTG
ACTAATGTAAGAGACAGAAGCTCCATTTATAAAAGTGACAGGAAAATATTTTGAAACAATTACTGAGGTGATTTTTTTT
TTTCATGCAATCCCTTTTACCTGTAGTTCTGTTTGCCTCTTCAATCTAGATCTCAGTCTCTGTGCCTCAGAGAAGGGAG
ATTTTATTAGACTAAAATCTAATGGAGGAAAAAAACGTTTATTAATGGTCTTTGAGTTTGAAATTCTAAAGCCCTGGTA
TAAATACGAGGCAAGTAAGAAAATTCATTCAGTCAAGCCCTGTTTGCTCTGCCTGTTGACTAATGATGAAGATCCTCTT
GACATGGGTAGAACAAAGGAACTAGGGAAGATGAAAATGAAGTAAATGCAGATGTTGGTCCCTGAAAAGTTCTCTGCCC
TGCACCCCACTGCAAAACCGAGATCCCTGAGGAGGCAGCGATAATAGTCTGAAATGAATTTGAGGCTCCAAGAGCAGAA
GGACCTGTCCCTTGCTTCCCAGGTGGTACCTGGGAAAATACCCAGATGCTGGAATTTTGTCATATCCTGGGATAGTATG
ACACCAGTTGAATAGGGGTGATGCTATAATACAGCATGATGTGGTATCTTGGGCCAAGAAAGCCTAAGTTAACTTCACT
GAGTTTCTTATGATCCCTAGAGTGGCTTGCTCTTTCCCTCTCCCCGCCTCCCCCAGATTAAAAATGGCCACGAATTCTT
TCTACCTCCCATGAAGGGACAGAGTCTAATTCCTCTCCCCTTGAATGTGGGCTAGCCTGGTGGCTTAATTGATGAATAG
AATGCAGCATAAATGAGCATCTGTGACTTCCAAGGCTAGATAACAAGAAGTTTTGCAGCTTTCACTTAGATTTCTTAGA
ATGCTCCCCACAAAGAAAGCCAGCTGTCACATAACAAGTCTGACCATGCTGCTGGAGAGCCTACCTGGGGAGGTGCTGA
GACTGCCTGTAGGGGAGAGGGAGGAGCTCAGTTAAGTCCTGTCTTCCATCCATCTCACCAAGATGACTGGCATGTGAAT
GAAGCCATCTTGGATTTCCAAACCAGTTCAGCCACAGTGAAACACCACCAAGTGACCCAAGGGAAGCAGAATCACACAA
CCCAGTTCTTAAAAATATGACCCGTGGGGCATGAACATTATAAAAATAATTATTGTTGTGGCCATTAAGTTTTGGATGG
TTTACTTCCCCACAATAGATAACCAGGTCATAGCTCTTCATGTGCTCTTAGAAGAGGGCTGCAATAGACAGAGTTGTCT
AACTTCAACCTCAAGAAGTCTTTTGGTCAGAGAAGAACTCACAAACTGACTCCCAAGGGAACACTTGGGAACAATGCTA
TAGATTATATTTTGTAATTATGCAATATCTACCTTAAAAGGACCTCAGGGGAGCCTCTTTTTTTAAGTTTGAACAGGAA
AACTCATTCATTTGCACATCAGCAGTGGGCATTAGCATGGACAAATGTTGACAGAGAAGCAAACAATACTGCCATGATT
GGTATCATTGGAGTTGTACAACACTGCAGCCTTGCTAGCCACCCACTTACTCTCTAAGTCTTAGACACTACCCAGGAAA
AAGGGGGGATGGTGAGGAACCTTCATTTCACTGGGAATATCCTCATATGGCAGAAGAAACTGTGATTTGTCTGAAGACT
ATCATCTTGAACTAAGTTGGTTATTTGCCAGTAGGAAAAAATGGAGTTTGAGAATTAAGAATAGTAATAGAAAAATGAA
ACAGTTATTTTTAGCACAATTGAGTTTGCAGCTTGTGAGATCAATATCTACCATAGTAATTAAATATGTGAAGTACAG
CCGGTAAGCCAATTAGAAAATCCCCATTATCTGATTAGCTCATCTCTTCCTGTGTCCATTTATTCTTTTACAGTGGGAA
TGGTTTTTCGGTTGTGATCAGAACCATTGTGTCTGCTCCAGTATGTACTCATGCTAGGAGGATAAATTAGTCATCAGGC
CATTCAGTCATCAGAAGTTCTGAACAAAGGTAATAGGAGAAGCTCTGTCTTGTGGGTCATCATGAGCCTGATGAACCAC
TTCTGCCTTACAATAGAGAACAGCTCTTTGGTGCTTAGAATTCTTGTGGTGTCCCATGCCCTCATTCAGTATTGTTCTC
TTCCATACGTGCTAAATAAATTATAGCAGATTCTGGCTTCCTGGTTACCATTGATTTCCTTCTAATGTGACCATTCCAC
AAGTAATGACAAACTTAATCGATAGGTATGTTTATACTGTTAATTAGGTATACTCAAAGCTTGTTTGGGACTTTGTAAT
ATGGCGTCTTTCAAGGATCTCCTCAGAGATCAGATTTCATTTGTTATATGTTGATTTTCCTAATTTAACTCAGAGTCCT
GAGTATCTCACTGTTGCCTCCATGTACTAAGGGTCACTCTATTCCCACCCTGTCCTGCAAGACATTCAGTGCAGTGCCA
ACCACACTTAACAAGAAGGATCCCAGTAAATAAGAAAGAGGAAGCATTTACATATTTTTGCTTAGGAAATGAAAAGAAG
GAAAACTTTTAACATCTCATTATAAATATCTACCACCCAGTAATTGAGTTATAGCTTATATTGTGCAATTTACAATTCA
TATCTTTAAAAGAGCTCACAGTTACCTCTATTTGTAAGTTTTGACAGCAAAAACCTGTTCATTTCTTCATCAAACATTC
ATTAATCCCTAATTAGTACCAAGTTCCATGGTTAATGCTTATTAACAGTCCTGTGAAAGGAATATTAAAAATATATAAA
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CCCTATGATCTATAAATTCTATTCCTAAATTGTATTAGTCATCTGGATAACAAATTAGCACAATGTTAATGGCTTATAA
CAAGAATAAACACGTATCATTTCAATTTCTGGGGAATCAGTAATTCAGATGAGGGTTTAGGTGGTTTGGACTCAGAGTC
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TGTAGGTGATAGAAATCCTATGTGTCATTGCTTCTCACAGGGATAGTAGGCAGATTTACTGGGAGTGGGTAAAAGGAAA
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TGTACTTCCCAGTCTTTTTTCATGCATTTAAAAAATAAATAAGAACGTTTGGTATTTGAGATTTTGTAAATTGATTGTG
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TTAGGTTGTTTCTCATTATTTAAATAATGCAGTGGAGTTGTTCATAAAGGGTGATCTTTAGTGTTGAGGATTATTTCCT
TGGGCTAGGGTTTCCAAAACGTTCTAGATCAAAGAATATGTTTCACATTTTCATATTGCTTTCTACAGGGTTTAAATTA
TTATACACATTTACCAGTAGTCTATTAAAGGACTTATTTTAATAGGTAAGTGAAGTAGGTATTTCACTATGCTTTGATA

Fig. 9.85

AGCATAGTGAACACTTTGTTCATGTGTTTATTAACCATTGTAATTGAGAAAAATGGCTGAATTGAGCCTTAAAGAATGA
ATAGCATTTTAAATATCAATTGAAGGCAAAGATGGGGAAGGTTTTTTCTGCAATGTTCATGGCATGGCAAACAAAGTCA
TTCCATGTCAACCTCATGGAATTGTAAGTCATTTAGTATAAAAGCTTAGAGCAGTTGTTCTCAGTCTTGGCTGCACAAT
AGGATCACCTGAGGGAGAATGTAAAAATCTCCAATATCTAGGCCTTACTAGACCAATAAAATCAGGATAGTTGGGTGAA
GAACTCAGGCATCAGTAGTTTCTAAAAGTCCCCAGGTGATTACAATCTGTAAGCAAAATGTGAAACCAGTGGTATAGAG
TGAGGTGAAATGGGATAGGTTGCCATTAGAGATGAAACAGAAGAGATGAAGACCATATGTAGCAAGACACAATGCTCTA
GGATAAATTGTATACTTCCTGGGCAAATTAGCAAATGCTGTTAGGTTAGTGTCCCTTTCTTATCATCTTGGAGTCCTTT
ACCTTTTTCATGCACTCATGCAGTGTGCATTACTCCCAACCAACAACTAGCACCTGATCTTGTGGACAGGCTGCAAGCA
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GCTGCTTCCTTCACAAAGAAATGTTTCTATGAAAGAAAGGTCAGCTGAAGTAAATAGTGGACTTACTGACTTAGCTGCA
AGCATCTTATTTCATCATGGACCAGTGACACAGACCAAGGATCTGCAAACCACACTTTGCGTGCTCTGCAGCAGTGAAC
TCATTTTTAAAATATCCTTTTCTTGCCATATCTAAGGTCCCGGCCTTAGTTTAGATGCCCATTAGTTTTGAGGTTTAGA
ACCACTGGTTTGCATTTCAAAACGTAACTCAAGAACCATGCCAATATTTCAATGGAGATGGTAGCTTCCTCAGAATTTG
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GTAAGGTAACTTAGGTGTATCCCACNTATCTGACGTGGAGCAAGTATTGAAAACTTTCTGGTGCTCAGTTTTCTCACTT
CTTGAATGAGGAAAATGAACTACATTATTCCTAAGGTCTCTTTCAGTTCTAAAATGTTATGTTCAACAAGAGCTACTAG
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TGCTTTGGAAATGGGTAACCATCTAATTAGGTTGATAAGGTCAACATGCAGGAGCTTTGGAAAGAGATTGGATAATATT
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TGTCACATCTTGTCCCCAAACAACCCTAAAATAGTTCAATATTTTTTAGACTCTTTTGTTGCTCAACTTATCTAGGAAG
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GTCTTTTTTTGTTTTTGATTTGTTCTTTATGTATTCTGATAAATATGTAAAAAAATCAAATTAACAAGTATCTGATTCC
AGTCTGTGTCCTGCTAGTTTTTTATTAATAATTTATTTTGATGAACATAAGTTATTAATTTTAAGGAAGTCTAATTTAT
CACTATTTTCTGTGATTGTTCATGCTTTTTGCGTTGTGTTTTACTATGTGATTTGAAAATCCAGTCACCACAAAATGCA
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TGGCCATTTTTAAGTATAAAGTTTAGTGTTAATAAAAACATTCATAATGTTGTAAAACCATAATCATTACCCATCTCCA
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GGCAACCCCCTGCCAATTTTCTGTCCCTATGATTTTGACTACTCTAAGTATGTAATATAAGAGGAATTATACAATATTT
GTCTTCTGTGCACTTGGTATAATGTCCTCAAGATTTATCCATGCTGTAGAATATGTTAGAATTTCCTTCCTTTTTAAGG
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GTCCCATGTGCATTGAGAAGAATGTATATGATGTTATTGTTGGGTAGTGTTCCATACCTGTCTATTAGATCAAATTGGT
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TCCAACTATTATTATAGAACTGTCTATTTTTCTTCTCAGTTCTGTCAGTTTTTGCTTCATATTTTTATTGTCCTATTGG
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GTAATCACAGGTTGAAATAAAGAAGGAAGCAATTTCCTCAAAGAAGTAGGTATGCCACTACCAAGAGAAGGGAAATAAG
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GTCTCTGGCTCTCAGAACTGGGGCTCTATAGAGGATCACTGCAGGCCTAAGCAAAATAGAAATACAAGATGCAATTCCA
GACTCTTACTTGGAAGTCACTTTCATGGGGTTTTAAGGCCAAAGGTGGATCCCTATATTACATCCATCAGAATAAAGCG
CTATCTGATTTTCTCTTACTGGTTCCAAGGAGATGCTCCTGTTGGTAAAATAGGGGCCCCAGAATCTCCCAAATTATCA
CCCTTAAAAGATCTTGTGTTAGTAATTCATGTTTAATTCCCTTTCCTTCCTAAGTTTCTCCAACATGAGTATAAAATTC

Fig. 9.86

TTATGGCTACAACAGCATTTAGATAATTGATAACTGTGACAGATAAACAACATAGTTGCTTTTGAATAATTGCTACTTC
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TGTGATTCTCAAACTTTAACATGTGTACAAATCATCTGGACGGCTGGTTAAGATATAGATTGCTGGGCCAAATCTCTCA
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GATCACACTTTAAGAAGTAGATAAAAGATACGTCCCTAAACATATTAACATGAATAAGTCCTTTATACATCATATTTTG
TCTCATTAGGGAAACTTTCAATTAAAAGAAACTGTATTTTCTTTGGAAAATAAAGAGCCTTTATTATAAAAATGAAAAT
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TGCTAACATCACTATTTCATACTTTGCAGTTTCTAATTCTGCCCTAACAAGTAATCTTTAATTCTTCTTCAAGTATTAA
GATAAATAATATTATTAAATTGGTATCTAGTAGTTATACTAAATTCATTTTTATTAAGTTCATTAACAGTGCCTGTGTT
CACCACCTTACTCGTAGGTAACAAACATGGGGCATCTTCATTTAAATCAAGTTTAAAAAATATTCTATAAGTTATGTAA
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AGGCTCAGGGGAAACCAAGAAAAAATTCACTTCCCATGACCTCAATTAATTTCAATTATAGTGAAAGAAACATTAAAACA
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GCCAGCAACAATAACCAAAGCAATAGGAAAATAGCCCCTGCTTCGCTTCTGTCTGCCAGCTGTCTCACTAGAGCACATG
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CCACAATACAGGTGAGCTCTCTGGAAGAAGGGAGAAATTAATGTTGAGGACCAATTCATCATATATACTAGACAAAAGA
TGGATGACATGGATAAGGAAATCTATAGAGAAGAGAAGCACCTGAGAACATGAACATTCAAGGGACAATTGAGGAGACT
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AACAAAAATTCTGTGTACCCCTAGTATTAGGCAAGACTTTGTTACAGAAAATCAACTTAAAGTCATTTATGCAAAAAAT
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TGTTACTTGAGAAAAAAAAATATATATATATAATGACAAAGAGCTACTATGAATTTAGTGACACTTAAAATAAATTTCTAAA
ATTCATGATAACAGCTGCTATGTACATTTAAAAATTACATATATATGCAACGATATCTTCCTTTTGCAAGTAATGCTTG
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GAAATGGGATCTGGACCCGTCCCCAGTGCCCTGTGAAGGGTTGCTCTGTACATTAGCTCCCCAATCTGCAAAATGGATG
TTGCTTGACCCGTTTTCTTTCCGCCTCCTGGGAACTGGTTAAAGTCCACACAAACTCCTTCAACCTCCAGGGACAGAAA
TGGCATCTACGAGCTAATGTGAGGGTCCCTGGGTGCAGAGAAATGTATTAGGAGCTGTGTTTCCGGAATGACGGTTTCG

Fig. 9.87

TTCTTGGTCTACTGAGCGTCACCGAGCTCGGAGGACACCTCTGTCATTTCAGCAGAGTGACAGGGCTCAATGATTCCAG
CGCCCAGGTGGAGAGAAAGCGGCTGAGGGGCTTGGCCGGCTCCTGTCGCGCCCCTCAGTCCGCCCCAGTCCCATGCAGG
CTCAGCGCCAGGCTCTCCGCCCCCGCCAGCTGTGGCTGTGCCGCTTCTCAGCTTGGGCCATTTGCAGTGGCCTGGCCTG
CCATAAAAGAGCATCCACCATTAGGATGGAAACGCAGCTGTTAGAAATAGAAGCACCAAAGTGAAACTGTTCTTGGTCC
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TTTTACTTCAGAGATATTTTTGTTTCCTTTTTGGGAAAGCCTTTACTATCTTTTGCTAAATAAGCAAGGAGTTGGTCTG
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CTCTTTCTCCCTCTTTTCCTCTCCTCCCACTCTCCTCCCTCCGGCTCTCTTTCTCATCTCTCTGCCAGCGTAAGTGTAA
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AAATTGCCATAAGATAATGATGACATTTTACCATCCTGTGACATTATCATTATTGATTCTTCCTCTATTTTATTTAATG
CCATACAACAATAGGCCCTTTGCTGGATTGAAGTGTTGCTAAAATTCTAGTGTGTTTGTTTTTTAGATGAATGGCAGAA
TTGCCAACAGGAAGCTTTTCCAAAATCTCCATTGTTATCCAGAGAGAAAAGAATGACATAGCAATGTTTTTAACATTTC
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AAGGGTTCTAGTGCTATACAGGGAGCAACCCAGGCGACCTGCTCATTAACACTAAAAAAAAAAAAAAAAAAAAAAAGAAA
AAAAGAAAAAAATACTTTCCTTGGGGACAAGCAGGATTTCTAAGGGCTTGCTGGCAATGTTATTTGACTGTACATAGAGG
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CAAAGATCTCAGAAATCTGGTTTTAATTTATCAGCTTTGAGTTGCTTTTTCCTTCACCTTTTCATGCTTGTCACTGGCT
GCCTAACCCAAGTGAGGCAGGTTTCCTGTAGATCCCATCTGTCTTGCCGGCACCTCCTGCACTTGCTGGCATCCCTTGC
CCTTGTTGGCAACTTCTGCATGCTGGATAGTGTCCCGTCAGGTCTAGGATAACGGTTCTCAAAGGGCAGCCTGGTGCCA
TTGCTAGTCCACAGATAGACTGCACTTTGATGCATTAATGATGTTTAATACCACAGTGACTATATTTTTACTTTGTTAT
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TGCTAATACACTCTATTTTTGTCTTTGCACATATCACCATCTCACAGAATGTATTTTACTCACTAATCACTTACACATT
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TCATGTAACAGCTCTGTCTAAATCTCAGAATCTCATTTATACCTCATCACTGAATATTTTTAGAATATTGAAGGAGTTT
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ATACATTATTCCTATTTGAACTGAAATTCTGAACATCTTTTTAATTACTCAAGGTTTCACAAATTATGAGAGAAGGTTA
TGATCTTTTCAAGTTATGCTGTAAAATAAGGACTTCTGTTAGAAAACAACAAATAAATGATTAGACTACCCTCCATGTT
ATTCATCCTCTGTTAGCTGAATATTCGTCTTAAAGTAGGGCCCTGCCATGCCATTCTCCTGCTAAGAGTCTGCATTGGT
TTCCTACTGGATCAAATCCAAGCTAAGGCACTCAAGTGCCAAGCAAGGCACTCAAAGCCTCATATAGTCTCATTTCCCC
TTAACCATCTTAGGTTATTTACCTCAGCTGCCTGTAACAAATCCTCTGCTCTAGTCAAGAAGTTTCTCTTCTTCTTTTC
TTCCTTCCTCCTTATTAGCCACCCCTCCTGCGTTAGGCACCCGTTTACTAGTCTGCCCTGCTTCAGGGACTTCTTATTT
CTTCTCTGATGTTCCTTTCAGGCATGAATGTCATTCTTTTTTTCCTGCTTATCCATACACCTTATGGACCTATCTGTAA
GATCCACCTGTAAATTACACACTTTGTTTTCATGTCCCTAGCCTACAACAAATAATCTCTCTCATTTTTCTTTTCTTAA
TTACTTTTGAACTTATCAGGTGTACCACACAATTTATTAATCCTTATTTAATTACAGACTGTAGCATTCTATAATTGTT
TCTAGTGTTAGCCTTGCTCTCTAAACAAGATTGTAAGTGCTTAAAGAGATTTATGTCTTATACTTTCCCGCCTATACTT
TGTAGAGTAGAGGTTGTTTTATTAAGAGATGCCCTACAAATACTTGGCTTTTCATCCTGTATAGGTATGAGTCCTGCTA
TTAATAGAAACAATGACATCATTTTAGGATAGATAGTAAAATGTGGTTTATCCAGCAGCAGATCCTTCCAATCTGATAT
TAGTTTTATGCATTTTATGAGCACACATATTTTCAGAAAGTCACTGGAAGATTTTGCTTCTGTTATATTTGAAATTTGA
ACACCAAACTTCCACATTGTGAAATGTTTGCATGAACACTTTTGAGAACTTTAGATGAAAGGTGTAGTATAAGTACAAA
GTATGCATCTTCAAAAAGCAAAATGAAAATGCAAATATTTAGAAATTTCAAAACAAAGCATGGGAAATTTTGGGTATAT
TGCAAGGCCAAATAATTCATCATTCCATTTCTAGAGCACTAGAAAAGGTTGGGAAATCTGTCCTTTGAAGCCTTAGAGT

Fig. 9.88

ATGTATATTTTTCTCTTTAGCCCTGTGCTGTTTCCTTGAGGATATGCCTGTAGCAATAAAGGTAATCGGGAAGGCTTTG
AATTTCTGAGACAGTGTTAAGCATTTTTAACATCAGATTAAAGGTGGCAAAAGCTAGGGATGATCTACAGGTGACTTC
AAATCAGGGGTTACATTGCAAGTCCGTCTTTTGGATGAGATAAGTCAAAGTGCCAGTGAATGTGTTTTGGTGGCAAGAA
AAGAAGCTGAGAGGGTCAGGATGCAGAAGTCAGCATTTTTTCAAGAAACACTGGGATAGAATTTCTTTGTGTGGAACTG
TACCATGTCTGGAGATACCTCACTTAATGACATTAGTTGAATACTGTGCAGTTTGTCCAATTTTCAAAATGAAGTACAT
TTATGATTTTTCCCTGTCATGCATATTTATTGCCTTTTCTTTTTTTGTTTTATTCCTTGAGATAGGGTCTCAATTTGCT
GCCCAGGTTGGAGTGCAGTGGGGTGATCTCCGCTCACTGCAACCCCCGCCTCCCAGGTTTGAACAACTCTCCTGTCTCA
GCCTCCCGAGTACTACAGGCACACATCACCACGCCTGGCTAATTTTTTTTTTTTTGTACTTTTAGTAGAGACGGGGTTT
CACCATATTGGTCAGGTTGGTCTCAAACTCATGACCTCAGGTGATCCACCCGCCTTGGCCTCCCAAAGTGCTGAGATTA
CAGGCGTGAGCCACCATGCCCCACCCTATTGCCTTTTCAGGAAAGTTTTTGGAGTGTTCTGAAGGTTGGGGAGGATCCA
CATTCTCTATCTTTAGAAGCTTTCTCTTTAGTGTCCCTTTGAATGCTGGCTTCAGTTCAGTGGATAATAGGTGGATCAG
GCTGGGTGCATTTTTAGATTTTGTGGTATCAGAATTTGAAAACAAGATCTGCTCCAAGGGTAGGGGCAGGTCCCACTGG
TAGAGACAAAAGGATGTTTTGCCAGTTTGCAAGCAGAGTGCAATGTACTGAAAGAGGAGTGCTAAGTGCAAAGTTGCAC
ATCTAAGCCAGCTGTCACTGGGCAAAGTCCTGCAAAGTCTCACAGGTGGCACCCCATGGGCCGGCCCATCACAGGAAGA
CAGAGCCTGAGTGTGGCCAGTTTGTGGTGCTCCAGGCAGTGGGTCATGAAGCTGGGCTCAAGTAGGCCTGGCAGCTGAC
AGCGGACCTAGCCTTTGAGCTGGGGATCAGAGTTGCAGGCTTAAAGGAGCTCTCAGGCAGAAACCTGGAAGACAAGGAA
GGTGGGGGAGTATGATAAGGACCAGCTGCTGAAAACGGGGCACACGTGGCTACAAAAATAATAATAATCCCCACAGATA
ATAATAATAAAGATAGCTAACACTTATTGATGCTTACTATATGTCAGAAAATGTCCCAGGTCCTTCACACATTTTAACT
CTATCAATCCTTAAAGGCTGGTACTGCTATCATCCCCACCTTATGGGGGAGTAAACTGAGTCCCAGTAAGGTGGAATAG
CATTGCAGAGCTACACATCTAATTAGTGGTAGAATAGACATCTTAATCCAAGCATTCTGGGTTAAAAAGTCTGTGTGTT
TATCCTCCAGGCTATCCCACCTTCAAGTACTAAAAGGTGATACAAAATAAATTGAGTCTTTACAGTTTATTGGAAAGGG
CAAAAGCTTTGAGCTAGAGAGATAAGGATTTGGATCTCACCTCTACCACTTGTTATTTCTGACATTTTGGGAAAATCAT
GTGATTATCTTAGATTTGCTATATCATATGTAGAATGCGGGAAATGCCATCCAGCCCATTGATTTTGAAGAACTAAGTG
AAATAATAGATACAAGCTAATTAGACTTCATCTGGCAAGAAGCTGCCACTCAACAAATATCTGCTTGCTTTCATTCTCT
AAATGCCCATTCGTATAGAGCTCTTTCAGTTACTTCCGATTGGAAATAGGATTATTCCAGGGCACAAGTCTGGGCTAAG
CTTGAGATAATTAGGGAAGCCACAGGTTTCAACCCTTGTGAAAAGAAGAATAGATAGATAGATAGATAGATGACAGATA
GAGACAGATAGATAGATAGATGACAGAGAGATAGAGAGATATAGATTAGATAGATGACAGAGAGATAGAGAGATAGCTA
GCTAGCTAGATAGATAGATAGACAGACAGACAGATAAAAGACACCACAGGCTATAGTGAGAGGTGAGACAGCACCTGGC
TGTTTCCTGCCTGCTTACCCTTAAACAATGTGGTGCTTTCTTCTTTTAATTTACAGAAAAATGTGCTGGCAAGTGCTTT
TGTATACAGTTAATTCAATCAATGAAACTTTGCATCTTAAAGATGTAAACTAATGCTCACTTCAGGAACAATAATTGGC
AAATTTAAAAATTATTCATTTTTATAAACATGTTAATCTTTTGCTTTCAAGATTTTTTGTGTTCATTAACTTTGTTAGT
ACTCAGAACTGACTGAAATGATTCTAAGTTTGAATTTCTATAATTATGCTTGAATTTCAAAGCCTACCTTGCATAGGAT
GGTGGCTAGGGCATAAATATTACATCCTATCTCCAGTTAAGGCATGGATACCTGCACCATCTTTCATATGAGAAGCATC
AACACAATTCTGACTATAAAATTTCATGATCATTCTTTCCACCTACAACTTTTTTGGATCTTTAGCTACGAATTACATT
TAAAGCTATTACTGTATATACTTTTTCTGTACTTAAAAACATATTTGATAGAAATAGCCCACGTGTTCGCTGTAGAAAA
ATTAGATTACATTAGGCACAGAAATTAAAGGAGAAAAGCCACCCATAATTCCAGTACTAAATAGTATCAAATTTTGAGG
TATATCCTTCCAGATTATTTTCCATAGATGTTGAGGCATAGTACAGAAATGGGATCACACTCTACATACAGTTTTGTAA
TCTGTGCTCCTCAGTCAGCTATTTATTACAATAAACACCTGTATATTCATATACATTATCATCTGTAGTAGCCTCATTC
CATTGCATTTTTATAGCGATACTAATTTAGGTAATCTGCTATTGTTAAGTATTTAATTTATTCACTAGGCCGGGCATGG
TGGCTCATGCCTGTAATCCCTGCACTTTGGGAGGTGGAGGCGGGTAGATCACCTGAGATCAGGAGTTCGAGACCAGCCT
GGCCAACATGATGAAACCCGTCTCTACTAAAAATATAAAAATTAGTCGAGCGTAGTGGTGGGTGCCTGTAATCCCAGCT
ACTCAGCAGGCTAGGCAGAAGAATCACTTGAACCTGGGAGGCAGAAGTTGCGGTGAGCCAAGATTGCGCCACTGCACTC
CAGCCTGGGCAACAAGAGTGAAACTCTGTCTCAAAAAAATTATTCACATTGTTTTTATTATTATGAACAAGGCTTTGACT
GTCATCTTTGCACATCCATGTGTCTTTTTTTCATACTGATTCAAGGGGCATGTGTGTTTATCAGGCTTTTGATGTATTT
GCCAAATACATCAAATATCTAGAAATAGCATGCTGACTATACTCCCTCTGGCAATAAATGAGTGCCTCAAAACTGTATT
TTTTTTCTTTTCATGTACCATCTGATAGACAAAATAGGCATCTCCTTATTTTATTTTTTATTCATTTGTTTTCTCGCA
TGGTTGATTTTTCCATATCATTAATTTAAAATTTTTAATTTATCCTTTTTTGTAAATTCATGATTATTTTCTCTCTCTC
TACTGGGACATATTTATTTTCCTTACTGATTTTTAAGAGTTCTCCATGTTGTACCTCTTTAACTATAAAATATGTAATA
TGTAATATTTTCCCAGGTTGTATTGTATATTAAAATTTTTTGATATATAGAAGTTTTTGTTTTAAAATTGATTAAATCA
CAGGCTGGGGATGGTGACTCACACCTGTAATCCCAGTACTTTGGGAGGCCAAGGCAGGCAGATTACTTGAGCCCAGAAA
TTTGTGACTAGCCTGGGATCCATGAGGAAACTCTATCTTTACAAAATTTTTTTAAAAAAATTAGCCCAGTATGGTGGCC
TGCACCTGTAGTCCCAGCTACTAGGGAGGCTGAGGTGGGAGGATCACTTGAGCCCAGGCAACAGGTTTGATTGCACCAC
TGCACTCCAGTCTGGGTGACAGAGCCAAACCCTGTCTCAAAAACAAATAAATAGATAAATAAAATTAATGAAATCATTT
TATTCATAGTTTATGCACTTAGAAAAGCATCTGGCATATATAGTGCTCAGAAAGATCTTCCTCACCCTTAGAGAAATAA
AACGTTCACATATATTTTTCTTTGAGTATTTCCATAGCTTCCTTTTTCATATTTAAAGTTTGAATTCATCTGGACTTTAT
TCTGGCATAATATAAGTCTTAAGGCTTATTTTCCCAAATGATTATCAAGTTGTCCCAGTATAATTGATTATCCTGTGTT
CCATATGCTGATAAAAAAATGTTAACTCTGTCAAATATCAAATTCTTATGTATAGTTGTATCTCTTTGGTGTTTCTGTTC
AGTTCTATTGGATTCTCTTCTAGTCTGGTGCCAGTATCAATTATTATAATTATTACAGAAATTACTCCTTTGTTAATAT
TGTCTTTCAGAAATGTTCTGGATATATTTACATTTATTTATATGAGGTCTTAAAATACACAAGCAATGGGAGACAAGGG
GGAATTGCAATTGGGGGTAAATAAAGCAAGTTTGGAAAAATGTTGATATTGTTGTAGCTGTGTGATGGGAATGTGGGAC
TCATGATCCTATTTACTCTGCTTGCATGTATGTGTGAAAGTGACGATAACAAAACTTTATATAAATAATTAGGTAAATA

Fig. 9.89

ATTCAGATCGGAACTGCATGTAATTGGAATTGCACATGCTTTCCTCTTTAGAAACATGTTTTTAAAAAAAGTCTCCTT
TTATGTACTTCAATGAAGTTTTGTAGTTCATTTCTTTATATAGTCCCTCTACCTTTCTAAACAAACAAGCATACAAAAC
CTAAGAAAGCTTCTTCATGCCTAGTTTTTAAGTTGTGTGTGTGTGTGTAGCAATTATATTTCAAATTGTTGGTATATAG
GAAAACCTTGATTTGTAATCAACCCAGTTACTTAACTTAAAAAAAAAAACTCTATTTCTTTCTTTTTTTTTTTTTTTGC
TTTCTTTTTGGGAGGTTTTTCAAGTAGAGAATCCTGTGGTCTTCCTATAGTGATAGACTTGCCTCATCATTTTCAATAT
TTATGATTCTCCTTTATGGGATTTATTAGCTAGCACTTTAAACACATTGGCAACTGAGGGTGGTGGTAGTGGGTATTTT
TCTGCTGCTCCCGGCTTTAATGAGAATGTCTTCCATCTTTGATCACTAAGCAAGACATTGGCTATTTGAGAAAGATATG
ACTTTTGGTCCCGTTTTATTAAATCTTAAAAATCAGGATTCAGTGTTAAGTGTTTTCACATGCATTTTAGACATTCTTA
GAAAGGATTATGTGTTTTTCTTTTCCCTTGGTCTATTACTTTAATGAGTTATATTAATAGGTTTCTTACTATTAAACTC
TTCTCACATTCCAGAGTGTGTAAACTCATGAATAATATGGATCTTGTGTACTGTCTTACAGAAATTCCCTAAATTGATG
GCATTTCTCCATGAGTTTTCTATTGTTTCTTGCTTCTAAGTGAATTTGGGAGCAAGGAGAGTGAAATAAATGGACTGAA
ATTTCTATCTTATACTGGAAGTCTGGCATACTTGCATTGACTGTCATCTACAGTAGAGTCAAATGTACTGACTGAAATT
CAGCTATGGTTAAAGAATGTGGCTTTTATTTCTTATAGCAAATTTTCTAGCTCTAGATTCTAGCTGTAGAGCCATGTTC
CCATTAATGAGGTGGGGAAAAACACCCAAACTTTAATTCATTTCGGGATTAGAATAGTTTCTTTTGGGTCAGTATGTAA
ATAATTGAAAGTTGAGCTATATATCAGAACTGTTTTTCTCCTCTTCAATGACTTCTGATGTCTTCCCTAAAACATAAAA
TAACTTCTGGGTGCAGGAGAAAACATACATATCCTGGATTTATACTTACTAGCCATGTAATCTTGTGATGATTATTTCA
GCTTTCTCTACCTTGATTTCTTCATCTGCAAATTGGATATTAAAATGACAACTATTTTACAGAATTTTGTGGGAATTGA
ATTAGTTAATATATTTTAAGTGATTAGAACATTTCCTGGTACATAGCAAATGCCCCATAAGCGTTTGTAATTATAATAT
AAAATTATGATTGTTCTCATAGTGTTAGGAGTGAAGTGGACTTTGGTTCATGTGCCATTTTCCAATTGAGTGCTCTTGG
GATGATTTGGTGTCTGTCTCTCCTGCCTCCACTTTGAAGTATCTGAAGCTGGTTTAATACTCTAATTCTGTTCTCTTGC
CATAAGCAAAGAATAGGAATTACATCTGTTTTTGCCAACTAGGTTGGCACCCAACTCTTGCTGGGAATATGGGGTCTCT
TTCCTTAGTAATATTTATGAATGAGATAATCTGTAACAATATCTTGGTATGGTATGATATGTTGTGACATCATCTTCAT
CTTAGCAGAGTTTGGATGAGTTAGAAACTGAAAGACCATTTTAATACTAAGTTTCTTTCATTCAGCTACTTCTACTTCA
GATATTAAATTTGGTTTTACTTTTTCATTTATATGCTTTCGCTTATATTACTTCTTTAGTGAATTAAAGAGATTTTTAA
AGAGAAAATTCTAGCTTCTCAAGCATCATTGTCCTTCTGAAAAATTGAACTAATAAGCCCTGAGATGATTAAAGCGTAG
CCGATCCTTAGAAAAGAAATTGCCATTTTCCATTTTCACTAAGAAATTCATCTATTAGCACAATAATATTTATGAGATT
TTGCTGTTGTGCAATCCCTCATTCATCCCTTATCACCATTTTGAATGAAGAGAGAGCAAAATCTAATTCCAGGTGCCAG
ATGGGTGCCACACAAATGGCAATGATTCAGCACAGGCTCCAGTTACAGATACCAAGCTCTGAACAGCTATTTGGATAAT
CAGGAGATCTTGGTGAACTGAGGTGAATTTTCTTCTGTGTGTCAGGTCCTCCACTTGTTCTTTCTCTATATTCAGAGCC
TTTGAATTTGCTATGAAGCTTGGTATCTGCTTTGTCCTAGCAGTTAAGAGTTGGTGTCACAATTCACATCTTGCTGGAA
AAGTGATGGGTTCATTTTGAGGCTCATTGAATGAGTCCTTGAAGAAGGAAGCATCAAAATGAAAAGGATTTCAAATCTC
TGAGTATAAGGTTTGAAATGTTCATTTGACCTCACTGATGGCTGTGGAAAAGCCTAGGCTTGGACACAGAAACTGAAGG
TTAAATCTTGTACTATAATTGAGTGTCTCTAGAATTAGTACAGGCTTCTCTCATTTTGTGGCAGTGTAACAGCAGACTA
ACAATCCTGGGAAGAGTGCATTTTTAATGAAACATTTTTGCAGGGTTAGTAAAATCCAGATCTCCTAAAAAACCCAATG
CTTGCTTACTCTAAGATGAGAAGGATAAGCCAAATTCAAGGCTTCTCACTATGCCACCAGGTTATACAATAAATTTTGA
GCTCCCCTATCCTACATTTCGAAGGATTAATTCTAACTGTAATTTACCTTGATTCTTAGAGCTCGCTGAGGCTCTTGGT
GTTAAAGACATATCAGGGGACAAAGTAATAAAAAGCTTACATTTAAGGAGTGCCTTCTTAGAGTTAGGTACAGTGGTTA
TATACGCTGACATGTAAGTTCATCATTTAGTTTACACAGTAGTAGCCTTGAAATGTGAGTTTCAGTATCTACATTTATC
TTGATCCTGACATTGACATGCAAAAGGGTTAAGTAGTTTCTCATGGCCATAAAATTAGAAAATGGCCAAAACAGAATTT
GACTCCAAATTCTTTGGAATATGGAATATGACTGATTCCAAAACCTAATATTCCACTGATTAGTTTTGTCTCTTCATCT
CTCCGAATCAACATCTCTTACATAAATTACTTTTGTTTAGGGGATATCTTAGAGTTCTTGTTTTATAATGGAGTGAGAA
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TGAATATGAAAGAAAAAGAGTATATTGAAAATGATTCTCTAATGGCAGAAAAATATTATAATTTATGCTGTACTAGATC
TTGATTTTGTTGCTTGTTATTTTTAATGTCTATAATAAATTGGTAAAACAGTAAAACTCTTGAAAAGCAAAAAAAAAAA
AAATCCAAATTCTTTGCCCACTTTTTTTTCTGCTGTTATTTTATTTTTAATGTAAAAAAGCCAACTGCTCTTTATCATT
CGTTAGAAATTTGCTCCAAACTAAGGGGCATGTACAGTTTTCAATTTGTGGGTGTTAATGACTCCACCACAGTGGGCTC
ATTCCCTTGCAAGGGCGCTAACGGGCTGTTGCTTCCTAAGAGACAGAGGATTGAGAGGTTTTGGTTTCTACTCATAGTC
TTTGGTTTCTTGGCTCTGTTATTTTCCTTGTTTATGTTTCTTTTAATTAACATTGAGTTTCTTCATTTTATGCCTTGCT
TTTCTTCTGTTTGTACAGTCTGCCGGCAATGACTCCTTGGGTAGCACTTGTTAATTAGGGAGAAATGATAGCTTGAGGG
TACTTCCTGACTTACTTGGTGCTAGGATAAAAGTTGTTCTACTGAAGCCGCATTAGAACAACTTTTATGTACCTACCTC
AAGTAAGATCTGCATGATGCTCTACCAATTCCCTTTTGTCTCTTTGATCTTTACTTTAACTCTGGTTTATTTTTATTTAA
ATTCTCATTGTGTCCCAAATAATCTAAACCAAGAGTATTATTAGGTCTTAAAATAATTCACTTGTATTTTTCTTAAGGA
GGCTATTCACAGTAGATTTTGTGGGAAAATAAAAATTAGAATTCACGGCTGATTGACTAAATAAAAGCAACTAAAGAAC
CAAAGGGTATGTTGATTTTAAAAAGGAACTTCTGAAGGTATCTGGCTCATAATTACCCAGAGATAATAATTTTGGTTCT
ATAGCTCAGATTGAGAAAGCTATACATAATATAATGCAGGATCTATAACATGGATTGTCTTTCTCAATTTCTCACTATT
CCTCACTCTCACCTTTCCTTCTCTCTTTCAGCTACCTATTCCTATCTAATCTATCTATCTATCTATCTATCTATCTATC
TATCTATCTATCTATCTAACTGTCTATCTATCTATCTATCTATCTATCTATCTATCTATCTATCTATCTATCTATCTGC
CTATCTTGTTTTTGCCAGAGAGGCAGAATGGTTCATGTTTTAGAACCTAGTTGGTCTCATGATACAAAGTACAGACTAT
GATTTGTAATTAATGATTTGTAGACAGCAGTCTCTACATACATTCTACAACCCTCAGTGAAATGCCATTTCTAATACTT
CTCAAATTTACAAGTATTCAGACAGCAGATTTTACTTTAATATGGGACAAAAAAACATTAAAAAGAATAAAAGGCTCAG
TGCCTTGATGAACTCCACTTTTCTTTGTAGCTAGTAAGCAGCTTGCACCAGAGATTTTATGGGGATCATCTTGCTATCA

Fig. 9.90

TTTTATTTTCCTCATGATGACTCAGGGAATTTTATCCTGAGGCTCTCAATGGATCTGTTATAGTCAAGCTGATGATGAC
ACATCTCAGAGGCTCATTCCATATTGGGCCTCAGGCCAGCAAACTACGCACCATGCTGTCCTATGATTCACAGGACGAA
ACTGCTCTAGACACCTCCCACTGCCCAGGCAGGAAGGGCACCATAATGAGGCAGTGGGAGGGTGTATGGCTAGGAAAGT
TGCTAAAAGGAAGCTTTGTTGTAACTTTCTTCTCTGCTGCAGGAGGCTAACACCAAAGCAAAGTATTATCAAGCAACA
GACCCTACATTTATGCAATATTAATGAGAAGGTCCCTGGACTTTTAATTAGGGTGGAGAGTTGTGTTTTAGAGAGCTGA
AATTATTTTAGGTGGGAGGAAATGGAATCCTGGGAGAAAAGTAATTAATTTATAGCTCAATGACTGAACTGTGCCATTT
TGAAATACTGGTCAAGGTGAGCGTTGAAAGAGTGGGTACTCTGGCATTTCCATACCCTTGGGAGTGAAGAATTAGGCTA
TTTGGGGAGCCAAATGATATGCTTGTATTTCCAAAAATGTCATTTATTTTGTAATAAATTTGTGCTGAAATAAAAAGTG
GCTTGTGTTCTCTATGTAAGTGTGACCGCCTGCATATTATTCATTCAATGGTCATTTACAGCATACTTTATAGGTGTGG
AATTCTACAGATGCCTTTTCTACAGGGACAAAGTTCTGACTAGATGCACAAAGGAGATGAAAAGAACCGTCAATGTCTA
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CACAAGAGCAGAATAACTCGGAACAGGCTTTGAAGCCATTAGGTGTATGAATCATTTACTGCCTCCTCGGGGGTCCCAC
ACCAGCTATTCTGAGATTCTGTCAGAGCACTTAGTGTATTGTGTTATTTGTCTCTGTCCCCCACTAGAATGAGAGTTCC
ACGTGGAGAGAGATTTTTATCGTATTTATCTCTGCATCCCTGGACCCTAGAGCACAGTTCATTGCATACCACAAGTGTC
CAGTAAATGTCTGGTGAATGAATTAGTAAAATAGATTGCTGTTATCATTTTGGAGGAAGAGAAGGGAATAGAATGATGG
TTTTATATGGACATAAACTACAAAGGAAATGATTTGATTCTTTTCAGTCTGGAGACAAAATGTGCTTTTCTTCTCTTAA
TTCTCTGTTCAATTCAGCAGAAATCAGTAAACATTTACTAAGCATATTTTATGTTGTAATTGTATATATAAACATGAAA
TGTTTTCTAACCTCAAGGGACTTAGAGTCCAGGGCAAGGTTGGCAGTGACGTACAATTAAACAGATCATTTTGATGTAA
TTTGACAAATATACTGTGGGAGGCATTCAGGAGGCATTATGGAGGGAGTAAAAAGGGATGTTAGGTCAGGCTGGCAGTG
GGAATGGGGCTGGGATATTGGGAGAATCAGGAAACTCTTCCAGGAGGAGATGACACCTGAGTTGAGTCTTGAAGCAAGA
CATTCCCAAACAAAGGAAGAAGAGCATGGCTATGGGGTAAAGGAAGAGGGGAAAAAGTCCAAGACAGAGGACAGGGAGG
TGAGAAACCGTATGGCGTATGCAAAGAATTACAAGTGGTTCCCTATAGCAAGTGAGTGAAACAATGCTGTGTGGGAGGT
CAAGGGATGATACTGCAAACAGCAGACAGGGGGACTCCTACTTACCATGTAAAGGAGATTTATTTGGACTTTATGCTGT
AGGGGATAGGCAGCTATTGATAGATTTTAAGGTGGACTTGAAGTAGGCAGTATTGGTGACAAGAAGAACATTAGAAAGT
GCCTGAATTTGTGTAGATAAAACTCTGGAAGACTGTGGTAGTGGTAGACCCCTCTTAGTGTATGAGATATGTATGTGGC
GGGTTAAAGTATACACATGGCAGCTAAAACAATGAAAACTAGTGGATTATCAAGAAATATAATCTAGAACAGAGGCTCC
CAAGTGCCAATCAAAAGTGGTGGTGCTCTTCACCCTTCATGATTATTATCTGGGGTATTGGTCAAAAGTAGATTCCTGA
GTACCTGTCCTCAAAGTTCTGATTCATTGGTGGAGAGTCAGCCATCTGCATTTTATGGCATTCCCTAGCTAATTTTGAT
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CAAAACAATGTGATAGCAGAGAGTTCTAGTCAGATAATTTGTGAAAAGTTTGTTAGATTTTGTGATATGGAGGTCTAGG
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CCAGTTAGAACTAGAGCAGATGGAGGAGGAAAGACAGGCATAGGTAGAAGACAGGACTCCTCATAGGAGGAGAAACACC
TCACTCATCCTCTCAGACAGCGGGAAAGGAGGTAAGGGAGAGTAAGCTGGGTGAGGAAGGAAGCTGAGGCATAATTTTT
GATGGGATGTTCAGAGAGACATTAAGAGGCTCAAATAGTTGAAAGGGTACAAAGCTGGTTGAAACTAAACCTAGGTAAA
GAGCCCTATTGTTAACTTACTATTTTAAAAATATTTTTCTTGAAAATTGTGACAGCTTTTTCTTTTCTTTTTTTTCTTTT
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GCTCACTGCAGGCTCCGCCCCCTGGGGTTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGC
CCGCCACCTCGCCCGGCTAATTTTTGTATTTTTAGTAGAGACGGGGTTTCATCTTGTTAGCCAGGATGGTCTCGATCT
CCTGACCTCGTGATCCACCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGCGCCCGGCCTGTGAC
AGCTTTTTCCACCCATATTGCATTTATTTTCTAACTTATAATAATATGAACCTATTTTGTAGATTGAGCTCCTGTTGGT
CCTATAAAACCCAAATCTCTTGCTTGCTGATTCAGTTGTTTATTTGCATTTGTCTCATGTTCCATGTGTTTTGCATTCC
CGGAAACTAGCACAGGCAGGGAGGCCTCAACACCTAATTTATTTCCTAGGTGAAGTGGAACCTGAAGATTTTCCTTTTA
TAGACACCATTACTAGATCTGAAAGAAAGAGGTAAGTTAATTGACACCCAAATGGAGGATGAAAATAGTAGAGTCAGGA
AGAGAGAACTTAATTTTAGCCATCTGTTTTCCAACTTGGCTTTTCTCAGTCTATAGATTCCCAAAAACAAAGTCTAACA
TTGGGTACGAAATAGCAAACTTGAGCACTGAAAAACAAACAAATGAGAAAGCAATCTAACAATTCCACGAACAAAAAAC
TAGCACTTTTGTATGTCCTCTGAAGTAAGAAGAGATGAGTAACTTTTGTATTCACTCAAATACTTTCTTTTAATCCAAC
TTTTAAGTATTTTTTCTAAGTGTTGAAAATTTGAGAAGCCAAGAAACATAGAAATGAGACAGAACTACCCATAATACTG
TACCTAAATATAACTACTAATATTTTGCTAACTTTTTCAGTCTTTTCTCTGTGCATAACTTTTTATAGGATAATATTAC
ACATACAACTTTAATCCTGCCTTTTTCACTTAATATTATAACACAAGCTTTTTCTCATATAATTGAAATATCTTGCAAA
ATATATGATTTTAATTACATAGTACATCATGAAGGTTCTCATATTTTATTTAGCAATTCCTTTACTATTTGACATCTAA
ATTGTTTCCAGATTTTCATTATTTTAAGTAGCACTGCTGGAATGTTTCTGCATACAAAGCACTTTCCATATTTCAAGTT
ACTTCCTGAATTATGATATAAAAGTGTATAATACCATTAAAGCTTTTGGTACTTATTATCAAATTCCTATCCAAAGACT
TATGTCATTTGGAAAGTTGATCAGCAATATATGAAATGCATATCTAATTATATATACACCATTTTCAAGTATTTTATTT
TTAAAAGTAAAATAATTTTTAAGCAAGACAAATCTTGAGATTTTAATTTTCATTTTATTAATAGTGAGATTGAATATAC
CCCATATTTTGATATAATTTTATTTCCAATTTTGCAAAATTTCTACTTATTAATTAAAACATTCATTTTTGTAGATTTA
TACCTCTAATTTTTAACATATTTTGTAAATGGTACAATGTATGTTACATATTAATACTATGGCAAAGGCAAAAGAATGA
TAATGAATTGCTTTCAAACTTAAATATATATATATATTTTTTGAGATGGAGTCTCACTCTGCCACCCAGCCTGGAGTGCAA
TGGTGCAATCTCAGCTCACTGCAACCTCTGCCTCCTGAGTTCAAGCGATTCTCCTGCCTCAGCCTCTTGAGTAGCTGGG

Fig. 9.91

TTACAGGTGCCTGCCACCATGCCCAGCTAATTTTTGTATTTTTTTTTAATGGAGACAGAGTTTCACCATGTTGGCCAGG
CTGGTCTCACACTCCTGACCTCAGGTGATCCACCTGCCTTGGTCTCCCAAAGTGCTGGGATGACAGGCACGAGCCACTG
TGCCTGGTAGAAGTTATATTTTTTAATCATACAACTTGCAGTATGGAAGAGACTTTACAATGTACCTTATTCAACCCTG
TATTATTAGTTTGTTTTCATACTGCTATAAAGAACTGCTCAAGACTGGGCAATTTATAAAGGTAAGAGGTTTAATTGGC
TTACAGTTCTGCATGGCTGGGGAGGTCTCAGGAAACTTACAATCATGTTGAAAGGCGAAGGGGAAGCAAGACACCTTCT
TCACAAGGAGGCAGGAAGGAGAATGAACACAGGAGGAACTACCAAATACTTATAAAACCATCAGATCTCATGAGAACTC
ACCCACTATCATGAGATCAGCATGGGGAAAACAGCCTCCATGATTCCATTACCTCCATTTGGTTTCTCCCTTGTCACGT
GGGGATTATGGGGATTATAATTCAAGACGAGATTTTGGGTAGGGACACAGCCAAACCATATCAATGCCCCAGTTGAAGA
AGCAAAGATTAAACCCATAAAACAATTATTGAAAAAAAAATGTTAGCTAGTAGATGAGTTTGTGGTACAACATACTTTT
TGTTATTGGACCTCAGAGTCAGTAGAAATCTATGTGACTTGGCGCAGTAGGGGAAGTTGTTATTAGAAAGAAGGGCTTT
TGTTGGACTTTGAATAGGAAGAGTTCTGTAAAATGAAGAGAACAAAAAATTAAAGGGCATGAATCTAAGGCCAAGAGGTA
GAAATGGATGTGTCTCAGGTGCGGCAGAGATGAGACCAGCCTGGAGGGTAGAGGGCTGGTGTTGGGAGATACAGTGTGA
GGTAAGGCCAAATTAAGCATGCAAATCACAGATCACTTGACTCTTCTAGTTGAAACACATCACTCTGGAGTTCCTACTG
AGCATAAGCTACAACCTGATTATATAAAGCCATCCTTGTGGTTACAGGTAGATTGCACTGACTTTGGCAAGTTTCAAGA
TGTTAAACTGTGCTGGGAAGACTACAAGATGGGTTGACAGATAAAACTAGTTTTAGGAAAATGCATGCACAGGGCAATA
TTATCAGCTAGCCACAGCAATGGCCATGGAATACAGGGTCCTCTCATTATTGTGTTGTCCCAGGCAGTTCTATGACCTT
AGGCAGACTACTTATGTTCCCTATACTTCAATTACCCTATTTGTACTCTACGTTCTTTCTAAATCTCAGATTCTATAGC
CTCTAGCAGGAGCTCAGATAAAGCATAGCTTCAGATAAACAGCACTCTAGAGAAAAGAGAGAAAATGTAAATAGCAGGA
AATCTCTATTGTCATCTTTAGATCTGGAATAAGAAGTCCTTTCTTTTAATTCACAATTTTAGAAGGTATGAGGAGATAT
CCAGAACTTTCTTCCCTTGTTTCTGCTACCAATGTAGCAGAGGGCCAACTGAAGCAGATGTTCACATTATCTATCTTAC
GTGTGTAGAGGGCAAATTAGTGGACATTTAAGAGCCCAAGGCAATAATTCAACCATTCCCATGAAAAATCTGTTATTCC
ATCCTTGTATGTTTCTTTTCTTTTAACTTTTTGAGTATTTAATTCTTGTGTTGCCTCCTCCTAATTTCCTTCCTGCAGA
TACTTTGGTGAGTAAACCTTGATAAATTAAGCCTGTTTTTATTATATTCCTTTGGAGTTGTCTTTGATTGTGATCAAGC
TTCTCTTTTTATACATGCCACATGTATTCATTCTTCATTTAGATGAGAATCTAATCAAGGGAATAAACTGCCAAGTTTG
GTTTCATTTATGCAACCCTAGAAAAATATATCTTTTGATGAGTTGGAGACAACAGTAAGTTAGAGACAGAGCTAATCCA
TTACACCTTGATCACTCAGAGGCAACTGTACCCAAACAATTCTTTCCCTTTGCATCAAGAAAGTTTGTTGTTTATCTGA
GAGCTTAGTACTGTGCCTGGCACATATAAGGTGCTCAATAAACTTTTTAAAACCAATGCATCTGAGTGGCTTTATAATT
CAGCAGTTACTGTATGAACTGACTTACTATGTAGAAGAAAAAAGTATTAGTTCAAAAAGAGGAGATTAAAGAATTCTTC
TTACATATATAAAACATGTCCTGTTCAGTAGCTTCTCTAATATTTTGTGGATGATTGGAATCCCTTTTCACTCATATTT
AAGGATGTCATTATGTATGGGGACATTTGCTGTTTCAATACATAGATTTATATTTGCAGGGAACTTAAAGTCCCCGGAA
ATTTTTCTGAGATATTATCTGATTAATCCCCATAACAACGCTGTGAGGTGGGTTGTGGAGATATGAGGGGAAAAAAGGG
AAGGGATTTTCCTAATACCATACAGTTTGTGTATATGACGTAGCAATGAAAGTAGAACTTATTTCATCTGATGACCAGT
TCAAGACATTTTCTGCTATATAAATCTTTAATCTCTAGGATAGAAACTGTCTTAATTCCCTTTGCATTGACACAGCAAA
ATGTATATAGGTGGTCCATCTAATTCCATCTCTGAATATTCCAGCACTATCTGTCTTATCCACCTCCTCTATTCATTTT
TATTTCTAAAGTGTTCTCCCTGCAGGAGCTGACTCTTCCTTCTTTCTAATTAACTTTATGTGGAAACTCCTATCGTAAC
GAAATTGCACGTGTGAGTGTTCTCTCGCCTGGCTTTCTTTTTAGTGCACCTGGAGGGAGAAAGCTTTTCTGCAGTCTCA
CCACATTATCTTTGCTGAGAGAGAAACTTGCAGGAACTAAGATAACTGCCTTCCTGAGAGTCAACCTTTTCATCAAACA
TTCTTTAGTTTAGGCACAGCTTTGATTTTTGCAGAGGTTACCACTTGTTCATAATTAAAATGCACTGGTTCATGCTATT
GGCAGCAAAGCACTATGGAAGAGTAGACAAAAACGTGGATTTTGAGGCAGACAAATCAGGTGTGAATACTGGTTCTGCC
ATTCCTGGGCAATTTACTTCATTCGTTGCTGCTGATTTCCTCGTTTGTGCCATGGGAAAACATATTAACAATGTCTACC
TCACAGGAGTATTGGAAAGTTTAATGATACATTATAGAGATTTTTTTAAGGATAAATGAGGTAGCAGAACATGCAATCC
TCTTCATAGACTGCAGAGCACATCTACCATTTCCCCTCCATCTCCACTCTCCTCCCTGCCCTACCTTGGGGGGCTTTGA
ACCCTGGAAGGCTGACCAGTCAGATGTACTTCTTCCTCCTTTGCCCTCCTGCTTGCTTGCATTTGGTTAGTGGGGAGTC
CTAGGAGGAGACAGATGGAGAAAGGAAAATGAGACTGCGTGCAACTGGTTGTCTTCTTCTTTTTAGGGTCTAGCTGTGT
CCCAGAGAGCAACTTCCCTTTTCAAGGCAGCCCACTCTGTGTGATGCTTTTTCCTAGGTATGGGCAACCCATCCCTCCT
AGGGTGAAAACTTCGCTGTTGCTAGTTCCAGGTACTGTGCCATCCTTTGTGGATTCCTCTACCCTACCAACATCTCCTT
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AAAAACAAGAATGGGCTGTTTTTACTTGCCATTTGATACTAAGAGAAAAAGAAGGTAGTGATGATGGATGATGATAAAG
ATATGATGATGGTGAGACCCAAATACCTCCTATGAGCCAAACATTCTCCTAGACAATACTTTTTACCTCATTCATTTTG
AAAACACATATGTGTATTATTATCTTTCTTTTGTAGATCTGGAAAAAGTTCAGATAAATCAAATAATGTACCTAAAAGC
TACATAGAATGCCAGTGGAGAGCTGAAATTCCAACCTATACCTATTTGGTTCCAAAGTCTATACCCTTTTACTGACGCT
AGGTGCCTCCTAGCTATACAGGGTGAGAAGAGCCATTCCATCAGCAGTCAGTTTTCAACTGAATCTCTCTGCCTATTGA
AATTTCTCTAAGTTCTAAATTCCCATAGGAAAGTATCTCTTAATGATGGTCTTTAAATGATTTCAAGGCAAATTTTTTA
AAAACCTGGTTAATTCAGCAAAGCTTATCAGGTCAAATCCATTATTTGTCTGATTTGACTGATTTGTTACCATTGAGTC
ACTAGCCCAGTAGGGCAACTATTCCATGGTTGTCCCTAAGGCTACTCATTAAATCCTGGATGAATAATTAAATATTTTG
AATAAGTTTTTCTCTGATAATATATGTTTCCTACGGCTGTTATCTAAAGTTTTTTCTCCCTAGATATGGAATATTTCAT
TCAGTTTGTATTAATTTCTGTCCAATTCCTAAATTACATGAGTAACATAATTCTGCATTTTCTGGGACCTATAGGATGC
TAATTTGTAAAGGTGATTCAATTCCTGGAGGTGTACTAGCTGAGAACTTTCCATTGTGGATCAGCTCCTCCCTTCAAAT
CCTACTCCTTTAGAAAAAATCCATACACACTCAGAGAAACAGTATTTATCTTAGCAACTCACATTTGATTGTGCATTTT
TCTTTAATCTTCAGGCAAGCATTTCTATCAACCTTGGAAGAAGGCTTTGTCCCTTGTTTCCCTTTGAGTCCCCAAGTTG

Fig. 9.92

CATCCAGAGATATTCTTAGCCACAGTGAACCTTACTTCTCTGTTTCTACCTCTACTTTGCTGTTACGGGACCTCTTACC
TCCCGCAAAGTGTCTTCCTTTTATTTTGAGAAGACTTGAGAGGGTGACTCACATATATTCCAAACAAGTATTTTCAGCC
TTTAAAAAGGCTGTGTTCCTTGCAGGCTTCTCTGCTTTCATTTTGTATGTTTTTTTAAAAAATGATACATAGTTACTTT
GTTTTTTATCTTTTAAATGTATAATTCATACTACTTTGTACTTTAATATTGTCAATCATTTTAGCAAAACCAGCTCCTT
CAGACCTTAATCACTGTTACTCTTTTCCTTAAGTCTCAGACACATGTTTTTTGAGAAGCTTACAACAAACCCAAATGAT
AGAACTACATGCTGCTGTTAGCATCAGCCTACACCTACACTATTAGCCTAAACCTGCAATATCAGAGTTTTTGTGGTTT
GACCAAGCCTTTTATCCTCTTTCCCTTACAGTAAGTTCTTTCCCAGAAAGAAAATATCAGCCCACATGCAAATATATCT
TATAAATATGTAGGTTGTGTCCTGATGTAGCAGAATATCATAAATGAACACAGCACATATAGCTATTCGATTTGTTCTT
TCTTCAAAACTCAAAATGGAGAATCTCCACTGTAGTGTCTAGGAGAAAGCAAAGATTAGTTAGGTAATGAGGATGTCAA
TGTCATTCAAGTGGCAATTACTCTGGAATATTCCTTGAAATAACAGTTACTGCTTACTTAACAGTTATTGCTTATACTT
TTTGTTCTCATCTTCTCAAGTATTCCTTACAACCACTAAGAACTAAAGGGGTAGATAACTCACTAAATTTACTGAAGAG
TCATTGGATTGGCTTCAAGGTACTATTGATTATTGTCAGTGAAACAAGACGCAATGATGCAGTTGCTCAGAGGGCTCTT
TTCTTCACATGTAAGTAAGATTCCTCCAGCAGTGGATCACCTTAGTGATCCCTTAGTGAAAAATTGTCGAATCCTTAGC
TGTCCCAACAAGAATCAACATATACACAATTCAGTTTGCATCTTCATTTTATACATGTAACTTTAGGTTATGGCTATCA
TATCTGTTTTTTTTTTTTTTCAGCCACTAAAACTGTAGAGTTGAATATTTAATGGAAAACAGATGGTGCTTGAAATCTC
TAACTTACATTTAACAAAAGCTGTTTTGGAAATGTTGCTTATGTATACTTTTTTATTGCTTTAAACACAGCACCGTTTT
AGCCTGTTCCGATGAATTATTTAAGAATTAACTGTCCCAGTCTAAGACAGCATTTCAAAGTGCAAGTGTTAATCATAAC
TTGATTAAACATTTCCTTCCTTTTCTTTTCAGCATTCCAGTTGGCTTTTGAGTGGATACGTGCAGTGAGATCATTGACA
CTGGAAACACTAGTTCCCATTTTAATTACTTAAAACACCACGATGAAAAGAAATACCTGTGATTTGCTTTCTCGGAGCA
AAAGTGTAAGTAACTTTTGTTTCATCTATTTTCTAAACACATGTACATATAACATTTTAGTTTTGGTTTTGGATTTTA
ATGCTATGCTATCATGATTAGGCTTGTGGGAAACGTTTAGTCAACTTTCAGTTCTCTGACTGTACACAGCTTATTAACA
AACAAAGACTAGTTTGTCTGTGTGACCTGTTAGCATTTGATGAGAATTCTTTCAGCTAGTTTATATCTTACCATTCATT
CATATACGTCTACAAGCCTGATGTTGAACACTCTAATTTTTGAGTGCATGCAGAAAATATATGATTAAAAGTCAAAATA
TAGGGAATTTATGTCTTGAATATGAAACCTTCTGGGCAAGTCTAAAAGCATAAATTATACTTATGTTATTAGTTACTTC
AACCAGTCACATTCTGAAAGTTCTTCCCTTCTATGAGCTTTCTACCCTGGCATATATCTCTAATTTCTTCTTTTAATCT
TTTTTTAAAAACATTTTAAATTGAACATCCTCAGGGCTCTACTGAAGGTTAAACCTTATTTCCAATTATGTAGTGTTCT
TAAGGTACCACAGTCATGATACTTTTTAAATTTATATTAGTGTATGGAAAAAAGCAAATAGAGCAACTCAAAGAAAGCC
ACACAAGGAAAGGATGAAAGCAGACTATTAATTTCCATCAAGCAAGCGCTAAGAACACATCCCTTTGTTCATTTACCCA
AGGGGGATAAGGCATCCAAACAGATGTACTTGTGACGTAGGAACATTAATTTGAAGGCATCAGAAAAACCACAAATGCA
AACACATTTCTCTAGTATGGGAACACTTTGTGTTATAACCAGTGATTCTATTGTGGTGGCCCAAGGCCATCTTTCATTC
TTTCTATGGAGTTACCATCCAGCTTTTAAGGGTGAGGCATGAGTATGTGCAGATAAAGTATAGTATGCCCAACTGTGTT
TGTTAAAAAAATGAGGATATGCTGAGAGATATGCCAATCCTTTGACTGAATACCGTGTTTAATAACCAACCAAGTAAATT
CAACAAACTCTGAGGAATTGTTCAAATTTATGTGTTTTACTGGTTGGTGTTTGGTTGTATGGATTATTGCATAAAAGAA
GGGGCCATGGATTTGAGCCTGGAATTCCTTTTATCATCATACAAAGTCACTCACTGTAATAGGAGGTGACCTGCATACA
AACTACCAAACTGCAAACACATCTTTCTCTTACTGAGTTTTCTTATTATAAATTAAATATGAAAGCAAACTATTCATAT
AATGTTTTCTGTTATTGAATTTCAGAGACATGAGATCTGAAAAAAAAATGTGTAAAGGCAAAAGGGAGGATATTTTGAA
TAATTACAAATGTCATTAAACATTTCCCTATTCTTGGAGGAAAACATTGTAAAAGCAAATGATTAACTGAGCGGTGACT
TTAAGGAACTGAGACTACTTAATGATGCTAGGAGACTTCCTATTTGTATTTGTTTAATGCAAAAAATTTTATCTTGGTG
GAAAGGCTCAAGCTTTCCAGATTAAGAGAACCTGAGTTGCCTACATTTGTCAAAATGTAAACAGTAGAACTCTCATTTC
ACTGCTTCCTAGCTTCTTGAGAATCCACTGGCATAAAGAAAATGCTTCCACTTAATTAAATGACTCTAAGCAGAAGTTA
ATGTTTATCAGAAAAAAAGAGCCAGACTTATTGCCTAGTTAGAAGTTGTCACTTTAGGGCTATAAAATTTTATTTTGCT
CTGGTCTGAGCATATAACCCTCCAACGCTTACGTTTTTGCCATAATATAATCCAAAATTGTATACTTAGAGGTAGATTT
TTCCTGGTTTTGATGAAGAAAGTTTAAAGAATTAGTTCTCTTTAGAATCTGAGGATGTTTATCTTTGGCATTCTGACAT
TTGGAAATCCAAAGAAAATGTTCGAAATTTAAAACAGTCTCTGTTCCTCCCTACATGCCTCTCTTGTAGGTCTTGCATC
TTTCATTGTGAAAATTTAAGGCATACAAAAGAGGTAGAAAAAAGATCATCCTTAAACGATCACCTTACTTAGTGAGTTC
CTCTCATGAGAGGGGTTCCAGTGTGTCTTGGAAGACCATTTAGTCACTCTTCAACTCAAACAATTCAGGCATAAGATGG
GTGGTTAAACTATGTGAGTGTTCTGTTTCCTACCAGTTATGAATTTCTATGATTCTATACCATGTTGTGCTCATTCGTA
AGTTGAATCAAAGACCAGTTCCCAAATAAATATAAAATCAAGGCATCAGGGCAAACAGAGTATATTAATCAGCTTGGGC
TACAATATACCATAGACTAGGTGGCTTAAACAGAAAAGTATTTTATCACAATTCTGCAGGCTGGGAAGTTCAAGATCAA
AATGCCAACCAATTTTGTTCCTGGTAAGCTCTCTCGTCCTGGTTTGCTGATGGCTTGCCGAAAGCTACTTTTTCCCTGG
GTCCTCACATGGCAGAGAGAGAGAAAGCAAGATCTCTGCTGCTGCTTCTTTTAAGGTCACTAATCCCATCATTAGGGCCCC
ACCTTCATGAATTCATCTAACACTAATTACCTCCCAAAGACCCCACCTCCAAAAACCATCACATTGGGGGTTAGGGCTT
CAACAAATGTATTTCAGGGGGACACAAACATTTGGTCCATAAGAGAGTTTGATATTCTTTTTTTTTTTTTTTTTCTGAGA
CGGAGTCTTGCTCTGTTGCCTAGGCTGGAGCGCAGTGGCGCGATCTCGGCTCACTGCAAGCTCCGCCTCCCTGGTTCAC
GCCATTCTCCTGCCTCAGCCTCCCGAGTAGCAGGGACTACACGTGCCCGCCACCACGCTCGGCTAATTTTTTTGGCATT
TTTAGTAGAGACAGGGTTTCACCATGTTAGCCAGGATGGTCTCAATCTCCCGACCTCGTGATCCGCCCGCCTCGGCTTC
CCAAAGTGCTGGGATTACAGGCATGAGCCACGGCGCTGGAGTGCAATGCCGGGATCTCAGCTCACTGCAACCTCTGCCT
CCCAAGTTCAAGCCATTCTCCTGTCTCAGCCTCCTGAGTAGCTGGGATTAGAGGCATGCGCCATCACACCTGGCTAATT
TTGTCTTATTAGTAGAGACAGGGTTTCACCATGTTGGTCAGGCTGGTCTCAGGTGAATTTGATATTCTTAAGGGATGAT
TGATTTAATAAGTCACTGTCTTGTTTAAGCCCAAAGGGTAGTGACTAGTATAATGGAATCTGTATGTTTTCCCAATTTG
GTAACACTGAAAATGATCTGGTCAACATCTTTCTCTTCATTTCTTATTTCTAAATTTTATGTTAGGACATTCTTACC

Fig. 9.93

AATGATTTTTGAAGTCTAATAATCACTTCATAGACCTAGAAGCTAATTTTAATTTTACTGAAAATGATTTTCCCCTTTC
TTCACTATTCTTAGTTTGCTTATTTTATATTGTTCTTTCTTAACATCTAATCCAATGACAGGTCTCTGAAGTATCTTGT
CCTATCAATGGATTTACTATTTAACTTTTCAGATGTTTATATATTTCAGAACTGACTATCTCAGTTACCCTTCTTCCCT
CTGCTAATGCCTGCTTTCTTACTGGCTTTTAGCTAATCAGGGGAGGGAAGGAAAGGTACAGACAAGAGAACAGGATATA
AAAATTTTTGTTGTAATTATATATTTTAAAATCAGGAGTTAAAGTAAAAATTTTAGCATTTTCTTTTCTTTATAATATC
CCTGTTATTCTCCAAACTCATGAAGTTTTATAAATCTTCTCATCTGGAGAATAAACTAGATAAATTTTAATTCTTATTC
ATTAATAAATTTTCTTGTGTATTAAATTCTAAACTTTCTTGTAGTCTTTTGCATTAAATTCCCAATTTTCTAGTACACT
GAATCATTTTCTTCCTACCAGTTTGAAGATATTCAAGATGTCATCTACTTAATTGGATTTGTTAATTTTCTTGATGAAA
TTGCCCTTTATTTGACTTAGGATTCTTATGGATGTTCTACTTTTGGATAAATTTGTCACTCACCAGATGTCTTTGATGT
TCCTTGTTCTTTTTTGATAGAATTGTTGTTCAGTGTTCATTCAAAACTGGAAGCAACTCCTTGGTGTTTGGAAGACATA
GGGTATCTGGCACATTCTTTCATAATGAATTTAAAGCCCACCTAAATAGGCTGTCAGTTTTGAGTCTGGGGGCTAGGAG
CCCATCTGGTGAAATTTTTCCCAGTAGGCTCCCTAGAATATTGCTTATTTTCATGGAAGACTTTAAAAAATTGTACAAA
CTTGGTAAACTAAAGTGATTTTATTCTTAAGAAAATATATATTTTTTTCCATCTGTACCTTTACATTGCTGAGTTTTTA
GAAGCAGTCACTCACCTAATGACCCAGGGTGAGTTATTTATGCCATTTTATCTGCATTTTTTAGTGTCTTCCTGGAGTG
GGCAGCCAAAAAAATAAATTTAGAAAAGATGGTACATTTTGTTATGGCACTTCAGAGCTATCTGCATTCATTTTTCCTCA
CAATTACCCTGTAAGATAGAGTATTTTTTATTTGTATGGTTAAAGTAAAAATAACAAATTCCTTCCTAGATGGGCTTCA
ATTCTCTACTATATTCAACCCCACCTAAGCTACGAGATTGACAAAGCTGTTGCAGCTTAGAATCCTAATAAAGTTAAGG
ATGTATAAACTGATTTTTTTCACTGGTATTCACTCAGCAGGGTCCAAGAAGGTCACGGGAGATGCTGTAGGTAAAATCC
TTTGAAAAGCACAAAATACAAAACAAAACCAAGTTCCTGCTTGTGTCTTTATTCACAACAAATTGATATGAGAAGTTGT
AGTTTTAGAGATTTCACTCCTTTGGTCCTTATACCTGCCTTCCAGCTTGTTCTCCTTCTTTACAAAGTTCTACAAATAT
TTACTGAATGGCTACTGTGTGTTAGGCTCTGAGTATCCAATGTAAGATACATGTTCTCTCTACCCTCATAGAGCATATC
TGATAACTAAATTTATAATTTTTACAATTTGTTAAAATTATTTCACCACCCTGTCTCCCTAACCCTGATCACCTAACTG
TATCCCATTTTAATCTTTAATTCTTTTTAGGAAGGCTGAAGTTCTGTATCTCTCTGAAGTCTCTCTGTATTTGCACTTC
ATCACGTTGTGGGCACCCTGTTTAGTAGGGATATTTTGAGCTGTGAATAATGTGCTATAATTGACAATTATGCTCATTG
TTGCAGAAACATAGATTATTTCAGAGTAGATAAAAAGAATTTTTCTCAGATAATCAACAATAGTATAAGAATAGCCAAG
AGTATAAATAAATGTGAGAATGACAGGAAAGGTCTGAAAGAACAGCGACTGATCAGCAACCATTTGCTTTAAATCAATC
ACATGTCACATGACTGTTTTAGTGGCCAAAGCCAATCATTAAATTGTCATCTTGGAAAAAGTTCCACTTTTTTCTGTAC
TGTGATGTGTTTGCTATTTCATTTTTGGACAATTTCAAGTTGAAGTTGAATTACAAATGATTACGTCCAAGAAATAATT
GCATATATTGTACTTACCAGTGTAAACACCACAGATACAAAAAAATGGAGAGAAATCTTGTTGCATTGTTAATGAATAT
TAAAAAATTATTCTTACAGACAAAATCTCTCTATAACAAAGTGAAATTTTGAAGAAAAGCATAACTGGTGGAGTTTTCT
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TACATTGTTTCCCATGGTCAGCACTTTCAAGGGCAGAACTGGAATTGTCCCTGAGTTATAGTTCTGGCTTTGCATCTGT
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TGCATAATTTTTTTCAAGGGTAAAATGAGAAAAACAGCATTGAAATCACATTAAAAAATAAAGCAAACAAAAAAATCCAA
ACCAAATCATCAAGCAGAAATCATTTTAAAAATGCTATACAATAATCAATTGTGTTCAATACTTCTGCGCCAAAACCTT
TAAGTCTTAAAGCTTTCCTAAATGGAATTAGTCCATCAATAAGCAGATAACAACTTTACTTTTATTGTTGAAAAATGTC
ACTCTTGTCAGTTCACAAGTTTCCCTAACTTGTGCAAATTAAAAGCCATGACAGCAAGGCCAAGAATGGTTCGTTGGTA
TATAGTTAGAGAGACCCTGACCCTGCTTTCTTGTTCTTCCTATTACCCAGGATATGTCATACGCCACACACATGGGGGT
AGGGATACCGCCCTACTTATAGCATAAGAACTGAGAATAAGACATTTAGCTTATAACTCTTTTATGGTAATATTCCCCT
CCCACTGCCATTCTTCCTACTCAGGTAGTCTGGACTTCTGTTTTGGCAATATTGCTTCCGTGAGAAGGATTTGACTGTA
CTTGCAGCCCTCAACATCCTGAATTTAATACAATCTACGATATTTGTTAAGCCCTCACCAACTATTTGACCAAACTATG
ACAGTTACATCCCACGGAACTGTATACCAAATGGTACCCCAGCAGTTCAGAGAGTTAACACACCACCAATTCACTTCCA
GGTTGGGCTTTAAGATTTTCAGAGGATCTTGCTTATGAAATCATATTGGCTTTTAGATAAATGTATTAAAATTACTGAA
AACAAATGATAACACCACAGTACCACAACCTAAACAATCCTTTCTATAAATTAATTTAAAACAAGAAACAACAAGCTTT
AAATGTCATCATCTCTGCTTATTGTATGTCCTTAAAAATATTATTAAATGTCCAACTTTTATTTTTCTAGAAGAGGTCA
TTATATAGCATTGATTTGCCAGCAGGGTTCTATTTGAACATACCAAGAGACCTAGACATTGCTCAGAAACAGTAGTCTC
AAAATAAACAAGGGATTGGAGGAAAAGATGAGAGATCTCCAGTATGTCTGCATATAAGGGCTGAAAAAGTAAAAGTTTC
CAATTGTTTTTTTTTCTTTGCAAGTGCTCATGCAGGGATTCAGAACATGCATTCCTCACCCAACATAAATGAAATAATT
GGCAAGTAGTCAAAGAAGACCATATCCTTGAGTGGGTAGTATTGTTGTCTATTTGGAAAGCATTTACATGTTTTGATTT
CCTGAAACAATGCTGAAAATGTCCTAATGCAGGAAGGGAGAATTGAAAACAACCACCATAAAATGCAATTAGATGTTGG
TAAAAGTGACTCAGAATAGACGTAAGTTAAAACTTTCTGACAGGGTTTTCTAGCACTGGGACAGTATTTTTTGAGGAAA
TTATAAAATGGTCTTATTTCAAGATCTTTTAACAATCTGATGAAATATTTATGGTTCTTTAAATTTGTATTGTTAGTAT
CATACTCTGAATTATAAAACATTTAAACATTTTAGTTTATAATCTTTAACTTCTCACTATTATATTTATAAATGTGTAT
ATAATTTGTGCATATGTAGACATTCATGAGGAAGATGAACATATATGTTAATTGGCATCTGCTCATTTAAAACTAAAGT
TGTATACTTTCATTACAGTAATACACGTCATTCATTAAATTATCTTGTGGCTTAGCTTTACAAATTCTTACCGTTACAT
GACTTTGGGTGAATGACCTCACCGGTGTCTATATCACTCATGTGTAACATGAGAGGAGTAGATTAAATAAACGAAAAGA
TTTCTTTCAACTCCAAAGCTATGACAATGTATTTTCAAGATTGTGTACTTCTTAGAACAGGCTCAATAATAATTTTTCA
CATTATGAACTTTGCAGTCAAAGAATAGGTTCTTCTTAACCTAACAAATGACTATCCTTTCCACCCAAAGTATAAACAG
GATCCTGATTAATAAATTGAGTTCAAAGAATCTCTGCCAAGTATGCAAAATCACTGCCTCTGTTTGTCGGACATTCATT
GCCTCTAAGAATTGATGGAATTGAAAATAACCTCATTTTACTGGGACCTCAGAGAATTAATTATTTAAATTTTTTGCTG

Fig. 9.94

CTTTAAACATTAATTTTCTTAATTTACCCATATATGTTGCTGATAAGAGCTGTAATATTTTGAATGGTTGTGCTTTGAA
GAAATCTGAATCCTTTTGCTTTGTATTCCAATGACAGCAGCTTTGACCAGCGACCAGCTCTCTTCTGAAAACTACCATT
TTGACCCCTGCATTTCACCTGTTGTCCCACCAAGCCTGTCTGTTTTTCCATTAACAGAGACCTCTGAATTGTTGTGCCA
AATGTGGACAGTGTTGTTTCTTCCTCACTTTCCTGAATTATAACCAGTTCCAGGCGGTAACATGCAACCGAACTTTACT
GAGTCCTGGACATAATGGGAAAAAATCATAGTGTAGAAAGAAAACTATAGGACTGAATATAAAAAAATAATCATTTCTG
GCATTACAGGACAAACCCAGTCCTTTCTGCTTAGTTACTGACCTACCCCCTGTTGCTTTGCTTATCTTCCCACAGTGAA
ATGTCTTTCTTCTTATATCCTACATGGTTTCCAGGCCCTTTACTCCAGGAAAGCCAGGAGAAACGCCTTATTCCAAGTT
CAAGTAAACATAATAATTTACAAAGATACAACTCTGCCCACAACAAAAAACTCCTTTTACAGCGTTATGCAAAGGCATT
TAGACTGGAACATCTATGTTCCAGACACAGACCTTAACCAGTCTTTTGTCAAACTAAAAGAGCAATCTTTCCTCAAAGC
TGGAATAACACCTTTTCTTTTAAAATAACATTTCGTGTCTCACACTCCCAGATGTTTTCATTTAAGACTTTAGAAAATA
CTGGGATCAGTTATCAGCCAAGAGTACCCCCATTCTAATAAAAATATTTAAAGACATGGAAAAATCAATGAATCCAAAC
AATCATCATCCTCACCAAACCCTTATCATTTCTATAACTCACAGTAAATAATCTCAAGTTCTTTATTTTGGTAAATTAA
GAAATTCCAGAGTAAACTCTCTAGCTTCTGATTTAAGCTCAGAGATGCAGAGAGCTTCAGAGTGTCGTTCTCATTCTTA
CCATAAGGAAAAAATCTATACAAACTACCTATTCATTAATTTAAAAAAAAGCACCAGCAAATTTAGGTCGTAGGGCAACC
AAACAACTCCAAATCTGGAAAGAGACAGGCACCTGCAAGAAGAAAGAGGATGGCATCATTTGTTTTTCCTTGGGTAGAC
ACCACCAGATGTCATGTAAACCAGCAAGATGATTCAGCTAAACATTTTAATGAATTGCTAAGGCTGAGTATGGGCTAGC
ATGAAAATGTGACACACTGGAGGTGGCAGATATAGGGAGTGCATCCTATAGCAGGCTTTTCCTCCACAAACCCCACCAG
GCACTCACAGGAAAGACTGGGGAGAACAGCAGCCACCTTCAAACCCACAACCATTTCCCAGTGGAACAAAAGAGTTAAT
TGGCAAAGAGAATAGCAAAAATCATTGTCTTAGGGAACTGGAGGAAACCCATTGGTGATGGTGGCAGTAGGAAGAATGA
TCGTGGTGAGGGGAAGAGAAAAAAGTAATGCTCTATCCCCAGGGGTGGGGTATGGAATATATGCTAGGATTTGCACAAC
AATTGGAGAAAGTTGCAGGAGCACTTGTGAAGGCCACATTGCTGATACAGAGGTACACATTACCTACCTAAGACTGAGT
CTTAATCAGAACATCAAGGAATGCCCTTCCTCCCTGGCCTGCTACCAACAGCCTAACAAGTGTTGAGTAAAAATAATAT
GGGAATATGGTTGAATATGGAAGAAATTCAAGAGACACATTCTCTTTAGGGCCCAGCATTAAGGGAAGACCCAAAGCTA
AAGGGGGAGCAAATATTAAGAAAATAACAACTGGCAAGCCATTTCACAATCTATTCCTCTTTAAGAATCCAAAAGTATC
TATCTCAGTATCTACTGTCCTACACAAGATATCCGGCTTTCAGCAAAATATTATGACCATATGAAAAGGCAAGAGAAAG
CACTCCGAAGAGATAATACACATAAACATGTGATATATGGGACACATATAAAAATTATCACACAAGGAATTTAAAGTAA
CTATGATTAATATTTTAAAGGTTCTAAAGGAAAAGGTTGACCACATGTGAGATCAGATAGGTAATTTCAGAGGAGATAT
GGAAACTAAGAAAAATCAAATGGAAATGCTAGAAATTAAAAACATAGTCAAAGAGATTAAAAAATGTCTTTGGGCTTGT
TAGTAGACGTGAGACAGCTAAGGAAATAATCACTGGACTTGAAAATAAGTCAGTAGAAATTACCCAAACAGAAAAAAGA
GTGGAAATAAAAGGGAGAAAGAAAGAACATAACAGAGCATCCAAGAACTCTGGTACAATATTAAGTGGCATGACATATC
CATAATTGAAATGACAGAAGGAGAGGAAAGAGAAAAAGAGGCAGAAGAAATGTTTGAAGAAAAAAATCGCTGAAAAAAT
TTCCAAAATTGATGATGGACACCAAATCACAGACTCAAAATCTCCAAGTATATCAAGCAAGATATATACCAAAATAAAC
ACACACGTGCAGAGTCATGTTATATTGAAATTGCTAAAAATCAACAACATAGAGAAAACCTTAAAGGCAACCAGAGGGA
GGGAATGATAAATTACCTAAAGAGAAGTAAGGATAAGAATTACAGCAAATTTCTCCTCAGAAATGTTGTGAGCAAGAAG
AAAAAGGAATGACATCTTTAAAGTATTGAAAGAAAAACAAAACCCAGTAACCCAGAATTCTATGCCCAATAATAATACA
GTTAAAACAGGAATTTAAATTTTTCTGACTGAACTTTTTAGGTTCCTATTCTGTCTGATGTCCCCAAAGTAATATGCAC
CTATATCCTCATTTTATTTTGTCTTTCCTTTTTCAAATCTGAGAGGGTAAAGCTGTTTCTTCTATTCAAGACCAACACC
TCTATTGCCTCAGAGGGTTAGTCAATTGCCTCCTCCCTCTATAGGCTCAATTGCAATTTAGCTAATCTCTCTTCTATTT
CTCCTTTTTACCTTAGTTTATGAACTAGACCATCCAGTCCTTTCTGTCACTCCCGTCCATGTATATCTCTTTTGACAAT
TCTAGTATTTATATTTTTCTTTCTAGTAGTTATTGCTATTTCCTTCTGAGACTGCATGTTCCTTAAACAATGCTGTTCC
CCAAGATTCAGTCATTGGCCCATGTAATATTTTAAGGTATGAAGACACCTGAAAGATCATAAGATATCTCCTTTCATGT
CTTAACTATCTTCTATTTGATTATCTCTCAATTTCCATATTTAGTTCCCATTTCTACTTTTAGTCACAGAACTCTAACC
AAGTGCTTGCTGGACATTCATAACATCTACACAACATTTCCCAAACTAGATGCATCCATTATTCTTCCTCATCTTTAAA
CATACTGCTACATATCCTAAATATTTTCTATTATATTTACTGCCTCAGCTATCCAGTTGCCTAAGGCAGAGCCCTGGGA
ACCTTCCTCAGCTCCAGACTCATCATCCCTCCCAACATCTAAACAAGCAACAAGTGTTACTGCATGTATTTGTGGGCAC
ATATTTCTGAGTCCTCATCTCAGCTTGACTTCCCTTTCCACCAATGCCCTGGGGATCACCTTATTTTTTCTCCCCAAGA
TGGTTCTCATTAAAATATACCACAGTAGTGATAAGTAGTAAAATTATATATGGAAGCTGCTGACTGTTGCTCCATTAGC
TGTTTCTGTGGCAACTCTATTTTTTCCTATTAATAGTGTACTAAGTGTTTTGAATCTATGTCTTTTCACAACTTCTTTT
GATTACAGTTTAAGATAGCCTTTAAATACTAAATTCATATTAAGGTGGATCTGATTGTGTGTGTGTGTGTGTGTAATTT
CTGTTACAGCCATCATTCATAATTCATTATTTGTGAGGAATAATTATAGCAAAGACTGATTAGATGAAATGTTAGATTA
TTTATTATACCAGATTCGAATGGAATTAAAGTCTAATATATGTGTTAATGTGACTAATAAGAATAACAATAATAATTTA
GAATTGCAAAATGCTTTTAAGTTTCCATATACTATTACAACATTTTCTTGTTTTTTTCCTTTATAAAAACTTACAGGTA
GGAAAGGCAGTTATATTTATCCTCATTTTATGAGCCTTAGACAGATTAGGTGAGTTAGCCAAGATGCACAACTAGTAAT
GGTGAATCCTAGATATACTTCAGTTCTTCTGATTCCAAATTCCTTACTTTGGACACTAAACCTTGGAGCCACACAAATG
TAACTGTAGGCATCACTTATGTACTAATGTACCTGTTACACCATGTGCCTACTGGAGAGAAACTGTAACATATTTATAG
TCAATTATCTATATTTATAGCTATCCTCACAGTTGGATAACAATGTTATATTGTAAACTCTAGATACTTTTGCACTCTA
TGACAGAAAGTGGATTTTTTGTTTAGGAAGACATTTTAATTATGAATGGAGGCTTGTTGGGGATCCCTATTAGCCTTTG
TTAAATCACAAGGAAGGTAAACTCTTTTGCATAATAAAGTATTAGGATTTTTAAACTTGTCCCCTGACTGCTCAAGAGA
TGAAGTTTGGGGAGCGGCAGTACTTTGGAGGACTCTGGTAAGTGAATAGATATAAGAAAGTTCTGCAGGGATAGAGCCA
CATGGCAGCAGACAGGGCTTAGGAAGAGGGACTACCAATTGTCCCTGTAGCAAAGATGGCCTGGTTAAAGCCTCTTTAG
AATGAATGAGTTCTAGTAACCAGTTTTAAAGATTTGTCTGTTTCTTTTCTCCCCTCAACCCTTTCTTTAAACTTTCTGT

Fig. 9.95

AATCACAACAGCATTGTAACAATTTTGCCTCAAGCTGGGAAGAGAAGGGCTGTGTTCCTCCTAGAGACAAAACAGGGAA
GAAAGGTAGCAGGGGCAGAGTGAAAGCAATGATTGCTGTGGAATTGGAACAACTGTGCAGAGGAAGCTGTGACAAATAA
TTAGGGTTGGTGAAGCACCTGTCCCTTTGGAGGTATTTCCCAGAAATACTGGGAAGGGCTCTAAATGTCCCATTGTTAT
GTGGGGAGATGGTTTTGTTTATTGTATTGCCCACAGAAGTCTGAATACGTTCAAATATTTTGCATATTTGTGTGTGTGT
GTGTGTGTGTGTGTGTGTGTGTGTATTGAAGTACTTGGCATAAGGTTATGCTATTTCAAATTAACTTATAAAGTAATTT
GGTTGATGCAATATTCTGTGATCAAAATTTATTGAGGACCTCACCAAATGCCAACATGTGTGTGTATATATATATATTA
TATTATATATATATAATATAATATATATATATTCACTCATTTAGTTCTCAAAACTATTCTATGACACTAATATTTTATGTA
ACTTTTCTATGATACGATTATTATTCCTATTTTTTGGATAAACAAACTAAAGTACACAAAGGAGCCAATACTTACGTCT
AAAATACCTAAAACATACATATTTGAAATAAGAGAATATGAGGAAAAAGTCTCAAAATTTTATGTAGGTTTTAATAATA
AAATTGAAAAGTCGAATCATTTTAAAACCTTAAAGTTAGTATATGGAAATATTTGGCTCAAGAGTGAACTTTAGACCTC
TTGTCTGGATATGAGTATGGAATACATTATTCAGTTTCTTTTTATAACTTTAAATAGCTTGTAAGAAGACACCTATGC
AAATAGCAATTTCTCCAAGATAAGTGGCCATACAGGCCTTATGACCTTTTGAACATGTCTTCCCAAATACTTCATTTCT
GATTAGAGGATGGTCATTCAGATTTCACTGGATTTAAATCCACAGTGGGATAGGTTTTAATCCTTTCTGGAAAAAATAT
TTATAAAGCCTATGTGAGTTTCAGAATAGTAAGAGCTTTTATTCTGTCTCTCCTTGGATGTGTTAACCCTTCCTTCTAC
CTCAGATCCATGCATTTCTCTAAGTTTTATACTTTGTTTAAATTGAGCTTTCATTGTTTCTATGACCAATTTTCAATTT
GTCTCTACTTTGCACTTCAGTAGAACTAAGATGAATTCTGAAAACGCACAACAGCCTTCATCAATGGTCCCTTTCTGTA
AAGAGTATCTCTCCCCGTACATATTCAGAACAGTATAATTTTAGGAATCAACTGTATCTACCTAGAAATATGTTTTATT
TCTCTCTGTCTCCAAAAACAATTGAAATTCTCTCATATGGTTTATTGCCTTGCATTTACAAAGGAGCCACAAAGTTCGA
TTTGTGTATACTATTTTTGCTTAACTAGCTATCTGGCTGATGTGCACATCAACAAATGACAATGTAGTCATTCCATCTT
TGGTACATGGAGTATTATTTGATAAAAATTCCACTATATTTTAACTTCTGAAAGTAAGGTGATTTTGAAGTATCTAGAA
GATAGTTTCTTTATTTCAACAATCATAACCCTGTGCTGCCAGATACATATTTTGATCCCAAACTTGAAAATATTTCAAT
GGTTAGATTATTATGCTTTTCATCTGACAGATTTTATGGTTTACCATTTTCACTTAAGCTTTCCCAGCTTTTTCTCCTC
TTTAAAAGTAAACTATTGGAAGTTTCATCATTTCCATTATCAATACTAGAAATTAAAGAGTCAGAGATATATGTATTCT
CAGAATTGTCTGAAGAGTTTATTGTAATTTAATAAGATGTTCTCTTCTGTTGTTTCATCTATTATGTCATTACATATCA
TCTATGTCATTATCGTGTTTCTCTTCATGATTTTTCTGGATCACTTTAATGCTCTAATCAAGTGCTCTTTATTTTGTGT
ACAGAGGCCTCATTATGATAATACTATATAAAACATTTGTATGATGCTTTTCAGTTTACAAAGTCCTCTTAAAAAACAT
TACCTTATTTGCAACTCATAACAACCTTGTACATTAGGCTGTGTTATTATTATTATTATCTGTAGACAAGAAAACACTT
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TTAGTTTGTTCCCTTTTACTCTGTATCCTTGGAATTATGTAGATCTATAGTGAAAGGCTAGCCTATCAGTTGCTAGCCA
TTACTTTACCAAGCTGAGCCTTATTTGACTCATCCCAAGTAATATAGGTGATAATGACTACATCATAGGATTGTTATGA
AAACTAAGTGAGACAAAGCACGTTAAAGTGTCTAACACAGTACCATTTTATCCATCCATATGCCATATGGTGGCATAAT
ATTCTAGGTTGGCTATTCCTTAATGCTATGTAAATTTTCTTTCTTCTGAAATTAAAATAATTATAATACTTAATCCAAA
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AGAGTAAAAACTGAGCCATTTTCTGGGAACTGTTGTGAAATTGAGTTTCTTAGGCTTTTCATGTCGATAATGCAAACTA
AATATAATTTGCAGGTCCACAAAAAGTAAAATGATATAAAATTATGCTAAAATCAAGAAGAATGGAAATTAATGGATTT
AAAAAATTATTGTTATTGCATTCTCTCAATTTTTTAAGACTCTGTCTCTGCAGTAATAAAGGGAACAGAGGGAAAAGTG
GGATTCCAAAATAGTTTATTTAGACTTGGAATGCTTGCATGCTTATATCTCACTCAACATGAATACGTCTTAACTAATG
GGGACTTAATGAAAACTTTATATTATTATTAATTGATTGTGGATTAATAAATGAATTAAAAATGGGGTTAGAAATAGTG
CGTTATTTCTTCATCTCTTGCCTTTATTCAGCTTTTCTCTTTGTCCATTCTACAGTAGGAATGAATTCTATCTCATAGA
TAGATTTAGAAACCAACTCCAGCAAAAAAATTGTTGTGCTCTTTGTGAGGGAAGAGGTTAGATTAGGATGAATTAAATA
TTTCAGTTGAAAAAAATCTGAGCAAATTCATTTAAGATATTTTGAAAACTCCTAAACAGTATATAAATATATGAAAGTT
TAAACAATAATAAACAGTGGAGGTACATCTTTTGTGTTGTAAAAAATGTAGTTGATCTTTTTCTTTAATGTTTCCTTAT
TTTGTGTTTTGCTTAGTGAGGCTTTTCTACTGCAAGATTATGGATAATTTTGCCCATGTTTTTGAACATTCTTATGGT
TTTTCTCTTTTCCCCTAACCTTGACAAACAAACTTCCTTTCAAATGTCCTAGATGCTTCAGGGATAGCTATTTGAAATA
GTTCTTGGAGATTAATAATTCTCCATGGCAAGCTGTCTTATCCGTATTCTGGTAGGTTATCTTATAGAAGAGGAAAAGA
AGGCAAAATCCTAGAGTTAAAAAATACAATAAACAAAATGAAAAAAGTAGTAATAACAAGTACAACAACAAGAGCTCTA
GTGGTATACTGAGAAACAACTGCATTCTTTTGTTCTTTTTTCTTATTTTCAATCATTATGTTGCATGAGGTACAGCCAT
ATGAATAAATATGTACTAACACATACCTAGACATACACAATCAGCCCTCATATTCATGATTTCTGCATCTGTGGTTTCA
GTCAATTGCAAATCTAAAATACTTTTTTAATCATCTGTAGTAAGCATGTAGAGACTTTCCTTGTCATTATTTCCTAAAA
AAATACAGTGTAACTATTTACATAGTATTTACATTGTATTAGATAATGTAAGTAATCTTGAGGTGGTTTAAAGTACACA
AGAGGATGTGCGTAGGTTACATGCAAATACTATGCCATTTTGTATCAGGGACATGAGCATCCGTGGTATTCACTGGAAG
TTGTGAAACCAATCTCCCACGGATACCAAGGGACAACTATATACATATATGTGGCTATGCGGCCTACCTACTCAGAAGA
GGGTTCACAGAAGAAGGGGCAGCATGGAGAGATTCATAATGTCTTGTGAGGGAGAGGGGAGCCTACAGTGGAATGGTTA
GTTAGAAAATAGCCAATAACTTATTTCCAGTGAGGAATTAGAAAACAGGGATTATGGAATTGGAAAAACTGAGGCATTA
AAAGTCTTCCTCCTGAAATTACTATGCCAAGTGGAAAATCTGCTCTGAACCCCTATCCAGGAAAACATTCTTCTTCAAA
AGATGTTACTTTTAACTTTGATAAGTCTTGATTAGCTCTTTTGGGTTTTAGCTGTTCTTTCACTATGTCCACACTTTAC
TTATCAATATTAATAAATCTTGTTATAGCCAGAGTGGTTTGCAACCTAAAGTAGAAAATATCTATATCTCAGGGCTTTG
TACCTGATTGCACAGGTAGCAATCCCAGGCTAAGAGTACCCCTTAATGCTGCAATGGCCACAGTAGTCTTGGACAGGGG
GATCATGCCAGTAGGTCTGCCCAGAATCTCTGGATAGATTTATTGTTGAAGACCATTCCTAGACAAATCCATTCTGTAA
AGACTGGAATAAGTATTTACTTCTTTAGATGTGCAGATATTGATACATGTCCTCAAACATCAGATATAATCAGGGAAAC
ATGATGACACCAAATGGACAGAATAAAGCACCAGTGATTGACCTTAAAGAGATGGAGATGCATGAACTTCCTGACAGAG

Fig. 9.96

AATTCAAAATAACTGTTTGAGAAAGCTCAGTGAATGTTGAGAAAAGACAGATAAACAATTTCTTTTAAAAAAGGAGAAC
ATTAAGTGACCCACAATGAGAAACAGAAAAATTGAAATAACAATTTTTAAAATTAAACAGAAATCCTAGAGCTAAAATA
TACAATGAACAAAATGAAAATGAAATAGCATCAACAGCAGACTTGATCAAGCAGAAAAAGAATCTGTAAACTTAAACAC
AGGGTTATTTGAAAATACACAGTTCAGGCCGAGGCGGGCGGATCACGAGGTCAGGAGATCGAGACCATCCTGGCTAACA
CGGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGCCGGGCGAGGTGGCGGGCGCCTGTAGTCCCAGCTACTCGG
GAGGCTGAGGCAGGAGAATGGCGTGAACCCCAGGGGGCGGAGCCTGCAGTGAGCCGAGATTGCTCCACTGCACTCCAGC
CTGGGCGACAGCGAGACTCCGTCTCAAAAAAAAAAAAAAAAAAAAAAGAAAATACACAGTTCAAGGAGAGGAAAGAATGA
AAGGAAGGAAGAAAGCATATGAGATTTATGTGACAGCATCAAAAAACAAATGTTTGAGTCATTGGTGTCAAGAAGAAGA
AAAAAACAAAGGAGTAGAAAGTTTGTTTGAAGAAATAAAATCAGAAAACTTTCCAAATCTGGAGAAAGAAATAAGTATT
CAGGTCAGGAAGGTCAAAGATTTCCAATCAGATTCAGTTAAAATAAGACTATTCAATACATATTACGATAAAATTCTCA
AAAATCAAAGACAAAGAGAGGGTCCTGAAAGCAACAAGAGAAAATAAGCATACAACACATAAGGGCATTTTAATATGTC
TATCAGCAAACTTCTCAGCAGAAACCTTACAGATCAGGAGGGACTTGGTGATATATTAAAAGTGCTGAAGGAAAAAAAA
AATGCCAGCCAAGAATGCTATACACAGAAAAGCCATCTTTTAGAAATAAATACTTTCCCAGAAAATCAAAAGCTGAAGA
AGTTTATCATTGCCAGACCTGTGTTAAAAAAAATGCTTAATGGAGTTCTTCAAGCTGGAATAAAAGAATGCTAATAATA
CAAAAACATGTGTTAATGCTAGTAACACAAAACATCTATAAATATAAAACTCATTGGTAAAAGTACATAGTCAAATTTA
GAATACTCTAATATTGTAATGGTGGTGTTTAAATCACTTATATCTTTAGAAGAAAGGTTAAAAGACTAAATTAGTAAAA
ATAATAACTACAATAATTTGTTACAGGACATGCAGTATAATAAGATGTAAATTGTGACACCAAAATTCAAAATGTGTTT
GGGAGAATGAGGTAAAAGTTTAGAGTTTTTAATTTTTATTTTGCAATCCATGTTAAGTTGTTATCAGCTTAAAATAAC
CTGTTAAAAGTAAAAGTGTCTTTTATAAGCCTCATGATAACTACAATGGAAAAATAACTTGTTAAAATTATGGAAACCT
CGTCTCTACTAAGAATACAAAAAATTAGACAGGCGTGGTGGCGGGCGCCTGTAGTCCCAGCTACTCAGAAGGCTGAGGC
AGGAGAATGGCGTGAACCCAGAAGGTGGAGCTTGCAGGGAGCTGAGATCGTGCCACTGCACTCCAGCCTGGGCGACAGA
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GACCCTATTATTGGTACACACAACACAAAATGCAAGGAATCAGAATACACTACTAGAGAAAATCACTTAACCACAAAGA
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ACCCATAAATAAGCCCTGAATGTAAATGGATTAAATTCTGCAATCAAAAGACAGAAAAATAGATTTAAAAAAAAGACCC
AATCATATTCTGCCCTCAAGGGACCCACTTCACCTGTAAGTACACACATAGATCAAAGGTTAAATGTTATTATATTATA
TATAATTATCTATAATATAAAAACATATTTATATATAATAATGTTATACAGATATAAAATTGAACACACAAATAAATAG
AAAGATATTTCATGTTCATGGATTCAAATAATCAATACTGTTAAAATTTCCATAATACCCCAAATGATCTACAGTTTCA
GTGCAATCCCTACCAAAATATTAATGACATCCTGCATAGAAGTAAAGAAATTTTAAAATTAATATTAGAATTATAAAAA
ACCTGAATAGCCAAAGTATTATTGAGCAGAAAGCACAAAGCTGGAGGCATCACACTACCTGACTTCAAAATACTCTACA
AAGCTAAATTAGCCTAAGCAGCGTGATATCAGCATAAAAACAAACAAACAGATAGACCAATGGAACAGAATACAGAGCC
TGGAAATAAATTCACACATTTGTAGCCAACTGAGTTTTGTCAAAAGTGCCAAGAACACACAATGGTGAAAGGGCAGTCC
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ATATTGTATTATTGAGAAATGCTAGGAAAGCGGGTATTAAATGCTCTCCCACAAAGCGATAACTATGTAAGTTGATGCA
TATGTTAATTAGCTAGATTTAACTATTCCACAATGTAGAATACTTCAAAACATCATTTTGTATTTGATAAATGCATACT
TAATTGACAGAATGTCAATTAAGAAACAAAACAAAACCAGCTCATGTCCTCCTGCAATGATTTAGGAATCCCAGAATAA
TTAATAGAGCCAAAATTTCCATCACATTTTCCTTGACTGCCAGTTCCATGTTGGCTATATCATTCTGTGAGCAAGTTTT
CATTTTTTAACATTTAGTATGTTTACTCAGTAATCAACATATTTGCTTATAAGTAGTGACACAGATATTCAGCCGCATA
TATTTTTCTAAACTGGTATCCTCTTGTTTCTGCACCATTTATTGAAAAAATCCATCTTTTTTTCTAGAAGTATGAGTTT
TTGATTGCTTAAATAGAATGGAAGGAGAAAAGGAAAATAATTAACTTTCAGATTTCACTAGGTTTTGGGTTTTTGCAAC
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GTTTTCCCGTTAGTTGTAAATAAAGGATTTCTTTACTCTGTGTCCTTGGTTTTCCTCTTTACCTGATATTTAGAATTAT
TATTGATAATTTAGTAATAATTTTATCATTAATATCCCAATCTATTGCTTGATTTGTCATCATATTGAGAGTTTGAGAA
GAATTTATTTTTATTAAATTATTTTCCTTAAAAACAAAGTGTTATAAAAGAGAGGGTTAATAGAACAAAATGAAGAATA
AATAGCTATTAAGAGGCTAAGTGGTATTAAAGACAGCTCTGTGGCATTTTGAGGTTAACATATTTAAATGATACATTCA
TTCCTAGACAGATAGATCAGCATTTACCAGATGGTTTCTGCTAGAATGCTCTCCTCTCCAATATCATCATCTCATTTGT
GGTGTGTACAGATTTCCAGAAAGTCAATGGGGATGTCCTGGGGCTAGTGGGCCAGGCTTCTTCTTTTCATTTGTATTCA
AAGCCAATATTTTCTTTCCAAATCTTGCCCCTTTCTTGTTTAACTCAAGGCTTGGCGTGGTAGGGGAGGTTGGGAATGG
TGAGAAATAGTGCCTCCTTGAATGAAAGGTTGGAGGAAATAAGTTTACAGACTTGGCAGTGCTAGTTAAGGGCACACCC
CATAAAGAAGTCTCAATATGGTTAACTAGTTTCCAGAGCAGTGCTACAACTGAGCCTTGTGCATCCCTGAAGTGATGAG
CACAAGTATGATAATCATCGGAAGAGAACATATATTGTATAATTTGGAATCAGCCAGTTATTTGTCAGACTACCTTTGC
TGTCTGTAGGATCAGACACACATGTGCCTCTGCATTTGGGTAAATGTAAAACCACATTTCCTATTATAAAGAGGAAAGA
CTGCTGGAAACAGCTGCTCTGGAAACCAAGTTGCTCAGAGGAAGTGAGCTAAACTTGTGTTTAGCTAAATGGTGTGTAG
CTAAACCTACCCAGTGAAAAAAATATGTAGAAATGGACTCAATAACTTTCTCAAGAGATGAAAATATAGAGTAATAAAT
AGGCAAGAAAATAGGGATAGAAATGGAAAAAGTGGAGAGAGAATAACAATGGGAAAGGGAAAGAGGAAACACGCTTATG
TGTTGTAGTGACTGACCAACGCAGTTTATGAAACAACATAGCTAGCTCAGGAGTTAGCCCAGGCTTTCAATTAAAAAGA
GATGCATAAGCCCATATACCTCTTTTTCTTTCCCTCAAAATGACCTTGAGTTTTAGTTTGGTAGGGTTTTGGTACAGCT
GTTATTTGATAATATCACATTGTGCTTTTCAATTAACTTAGATTGTTTAAAAAACAGATAACTGAAAACCATCTGTTTG

Fig. 9.97

TGGTTCTGTGTAATTTGTTCTCAGGACAGGGACTAGGAATGAACCATTTTAAATTCTGCTAATGAAACCTCTCATTAAT
TTAAGGAGTTCTACAAACTAAGTCTGTGGTACCAGGTAGAAGGGGTGCCAAGTGTTGGGCTTTCTGGGATAAGGGAAAA
TTAATTTCTTCCTTTGCCATTTGTGGTTGGGTAGCATCTTTTTTTTTCTTCCTGGCAGCGAGTCTCATAATTTAATAT
GCATTAACATAATCAGGAATGATTGCTTAAAATACATGTTCTTGAAGTTTATCCCAAGAGATTTTGATTCAGTATCTC
TGGGAAGGGCTCCAGGAATTGCCACAGTTAAACAAGCTCCCCAGGTCATTCTGATGTAGATGGTCTGAAGGCCACACTG
ACTAATGCTGCCTTTTAGAATTGGGAGGTAAGTTTGGATTTTGTAGATCAAATATTACTACCAAGAATAAAGAAATAC
ACAAAACCTCCAAACAACTCAAATGATGTAACAACAAAGCAAATGGCTCAAAGCAAACAAAACCCAACAAAAGGTTTTA
AATAGGTCCTTAGAGATACAATGTAATTTGTCTCAGCTGCGGAGACTTAAAGAGGCCAACTCTTAGTTGACATGGAAGA
ATAGGGACAACATTGCCAAGAAACATGGTTAATTTCAGTTATGGATACCAAACCCTGGGCTCTGGAAAGCATTAACAAT
TTTACCCACTATGCTAATCTTCCATATATGGGGCATGCTGGATAAATCTATTTTGCTAACGTCTCTTTTACAATAATGT
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TGTTTTCCCTCGAGCTTATTAAAGGGCATAATATCACTTTCCTCTTGTTAAGAGTAAAGATTGGAAGAATTTAGTTATC
AGAAAATGGTGGTAGGTTGATGCTTTTGGTGGTGGACGCAGCAGTCTGATGAATAAGCATCTTTCTTGAAGACCAGGGT
TCTGCCACTAAAGATGTATGTGATTTCTAGAAAAATAATTTTACCTCATTGCATCTCAGTTTTCTCCTTTGTAAAATAG
GGATAGTGGTAAGTGAATGATTTCTGTGATCCTCTCTAATGCTAAATAGAATGAGAATGTGCGAAGCCTTTGTTATCTC
AGTAAACTTTACCACAATTCATCTGTAACGACAAAATGTTATTATTAGAAACATATTAAAAAGCTTGCAAGTGGCATGA
ATTCAGGCACTGTAAATGAGTGTAGTGCAGTACTGTGAAGGTGAGGGGAAAATATGCATGTTTCAATCATAGGGCTACA
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GCCATTAGGTGGGGCAGTTGAAGAGTAGGAAGACCGTTTTCAAGTGAAATGTTGTTTTGCTTGAGTATGTTGTTTCATA
CTCAACAACATCTGAAAGTAAGTGGTAAAATAGACTTCCTTTTATATAGTCTAAACTCTCAGTGGCCAGATTATTAGTT
TCTTTATTAATTCTGGATGGTGAGGAAGAAGGGGGACATGGGTGATAAAGTTAATGTAATGTAATATTGCAGATTGTAT
TATTAATGTAAATTCCCATTTGGAACTCAAAAGCCAAAATGGATCTGAAGTCAACTTATGCAGTCTACTTTTTCAGAAG
AACAATTAAATAGTATGAGGTAGAGACAACAAAATACCAGGTTTATGGAACACTAGAAAGTGGAAAGGAGCCATGAGAG
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TCTTTTAGAAAATTCTATGTCAATTAATTTATCTGACATCTTAATCGATAATTCATTAAGAAAATCTTTTGTGCCCAGC
ACATCATGATGAATTTTGATGGCTAATGTTACCTGGTCTCTGTTTTGAAGTGTTTTTATTGACTTATAAATTTAAGATG
TTTTCCTAGAATTAAAAAAATGACATGGAAAAACTTCAAATCAGTCTTTTATAAGGTAGTGACTTTAAATTTTCATTTG
TCAATTTCCACATTTAGGACAAAAAGTAAGAGATGTGGAGAGGAAGACAGGAATACTAGGGAAAAGGTGAGAGAAGAAG
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TTCAAGCCCATGTTGTTTAAGGATCAACTGTAAATCTTTTAACTTTTCAAATGACGCTCATTCACACAAAGAAATTTGG
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ATGATTATGTTAATAATTAAAATATTGAAATATTTATTTAGTACAGTCATTCACCATGTAACATTTTGGTCAGTGATGG
ATGGCCTACCATGGTAGTTTCATAAGATTATAATAGAGCTGAAAAATTCCTATTGTCAGCTCTACTGATATCACAGCCA
TCATAAAGTTGTAGCATAACATATTACTCATATGTTTATGGTGATGCAGGTGCAAACAAACTCACTGCATGGCCGGTGA
TATAAAAGGATAGTACATACAGTTATGTACAGTACATAATACTTGATGACAAGAATTACTGATAATAAGTGTTACTGTT
AAGTACTTAATATAATAGATTACGTCCCTGATTTATGTATTTACTATACTATACTTTTTAATCATTGTTTTAGTGTGTA
CTCCTACTTACAAAAAAAAAAGTTAACCATAAAACAACTTCAGGAATGAGTTTCTTGAGGAGGTGTTCCAGAAGAAGGC
ATTGCTATCATAGAAGATGACAGCTCCATGTGTGTTATTGCCCCTAAAGACCTTCCAGTGGGACAAGATGTGGAGGTAG
AAGACAGTGATGTTGATGATCCTTATCCTGTGTAGGCCTAGGCTAATGTATGGGTTTCTGTCTTAGTTTTTAACAAAAA
AGTTTAAAAAGTTAATTTTAAAAAGCTAGAAAAAACTTACAGAATAAGGATATAAAGAAAGAAAATATTCTTCTACAGT
TGTAAAATATGTTGGTGTTTTAAGCTGAGCATTATTACAAAAAGTCAAAAAGCTTAAAGAAATTAAAACGTTTATAAAA
TAAACATGTTACAATAAACTAAGGTTATTATTGAAGAAAGAAAATGTAAAAAATAAATTTAGCACAGCTTGGCCTGGCG
CGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGGCGGATCACGAGGTCAGGAGATCCAGACCATTC
TGGCTAGCACGGTGAAACCCCGTCTCTACTAAAAATATATATTTAAAAAAATTAGCCAGGAGTGGTGGCGGGGGCCTGT
GGTCCCAGCTGCTCTGAAGGCTGAGGCAGGAGAATGGCGTGAACCCAGGAGGCGGAGCTTGCAGTGAGCCGAGATTGCG
CCACTGCACTCCAGCCTGGGCGACAGGGCGAGACTTTGTCTCAAAAAAATAAATAAAAAATAAATAAATTTAGCATAGC
TTAAGAGTACAGTGTTTATAAAGTCTACATTAGTAGACAGCAATGTCCCAGGCATACTCACCACTCACTCATTGACTCA
CCCAGAGCAACTTCCAATCTTGTAGCCTCCATTCACGGTAGGTGTTTTCTACAGGTATATTTTTATCTTTTACCACATT
TTTACTGTATCTTTCCTATTTTTTATATGTTTAGATACACAAATACTTACCATTGTGTTATGCTTGCCTGCAGTATTCA
GTACAGTAACATGGCATACAGGTTTATAGCCTAGGAGAAACAGGCTATACAATATAGTCTAGGTGTGTGTGTGTTAGGC
TATACCATCTAGGTTTGTGTAGGTATACTCTGTGATGTTGACACAACAACGTAATCACTTATGATGGATATCTTAGAAC

Fig. 9.98

ATATTTTAATTATTAAGTGACACATGACTGTACTTAATATGTATTAGGTACCAAGCTAAGCATGCAATTAACTCATGCA
ATCCTCACAATAACCTTATGAATTTAGTACTATCAATTAGCACCATTTTTTCCATGGAAATAGGATATAGGATATTC
TATCACAAGCATACCCTCAATGCTAGAGGAAAGAAAGAAAGAGACGAAGAGGGTGAGAAAGAGAGGGAAGGAAGGAAGG
AAGGAAGGAAGGAAGGAAGGGAAAGAAAGGGAAAGGAAAAGAAAAAAGAAAAAAGAAAAGAAAAGAATGGTTCATTTTC
TGTTTGTATTTAAATAATATCACATTATTATTTATTGGGAAAAGCTAACTGAGTTGGGAGCAGTGATGTAGGTTCGTAC
CACCATTAGTTGAAATCATTGCACTATCTGAGAAGAAAGACCATGAAATCTAGGAAGTTTAAGAAGTTAGTTTTCGTTA
GATCCAAATACTGTTAATGTTGGCTATCTTTTTTGGATCACAATTTAAGAGAACAGATTCCTTTAAATGAATTGGTTGA
GGAAATGAACAGAATATTTACAAATATTTCTCCTTAAGTGATATTTCATTAGGGAGAGGTCTTCCTTAATGCCTGTCTG
AAATAGCACCCTCCTCATTCTCTAAATCTTCACCTGCTTTATTTCTCTTTGTAGAACTTACCACCTGACACATTTCAC
AGTAGTTTGTTTGTAGACTGTCTTCCCTCTCTAGCTTCATAGGTACAGGGAATTTCTCTGCTCTGTTCACTGATAATTT
TCTTGTACCTAGAACACTGCATGGTACTTAGTAGATGTTCAATAAATATTTGAATGAATGAATGTATAAGTAAAATAAG
AAAATTCATGTGGCCAATAGGTAATTTAAAATATTCTGCTTTGCTAAAAACCAACAGAAGTAAAAATAGGTAAAAGCAA
TTAGTATTTTCATCTACCAACAATGATTTAAACATATTCAAAAAGATATATACCCAATGCTCATGAAGGTGAAGCAAAA
CAAACATTCTTACAAAATTGAAAAACACTTTGCTGGAAAGTACTTTGTGAATATGGTGTCTTTAAAAATGTTTCTATAC
TATATTTTAATTCTATTAATATATTCAGGAAAGCAATCCATAATTAAAAAATATCTTTTGCTGCACAAAAGTCTTTGCT
TCAACAGTATTTATTGTAGTGAAAGAAGTTCAAAAAATTCTAAGTTCCAAAGGTAGGGGCACAGTTAAATGAATTATGA
CAACTCTCTTTCATGGTATATTATATAAGCATCATGAGTTAGGTTTACTAAGAGCTTTTTTAATATGAAAAAAATGCTA
ATGAAATAAATTTAATTTGAAAAACAGCATAAACATTGGAATAAATGACATCTTAAAAGCATACATAGAAAAAATGGTA
GAAATTGTGCCAAAATATTAACAGAAACTAGGGCAGGTAAGATTATGGGTGATTTTGTTTTATACTTCTCTATACTTTT
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TGATAATCCAGAAGTGATTATGTTTTATACAATAGACTATGGCTTTATATGAAGAAATGAATATAGTCTAGTATTGTTT
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AAGGATATTCAAACACGATAAACAAACAGTAGCGAGGCCCGAGCTACCTGGGCTTAGAAGGCAGCAGGGCCCCCAGAAA
GTGGTAGTAGCAACAATTACTGTGGTTTTATCCTGTGGCTAGCCCAGGTTCCAGACAGAAAGTTCTTCCTGGCCTCTTA
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CTGGTACCTAAATTGAGCAGCTTGAGCACACAAGTTCCTCATTCTTTCATTATGTATGTCCTTGTTAAGAGACTGTGAA
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AAAGCTATGTGAACTATTGTAATAGGTTCAAGAACACACCTTAATTCTTGGACTGTTTTTAGACCTTTAGAAGTCGAA
GGCCTCTGAAATTATATGAGCTTGGGTGTTGAGATAGAGGAAACATGAAAATTTATTCTACCTGAACCTCTGCAGTTAT
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AGCATATATAGTAGATGCTTGATAAATATCTGTCAAGTGAATTTCAAATACTTAAATTTGTTGTTAATACATTCATGT
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CAAGTACACACCACAAAAATTGCTACAATAAAAAAAGATAGACAATGCCTAGTGTTGGCAAGAATGTGGAGCAACCAGA
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AAATGCATAACCTATGACCCAGTAATTCTAGTCCTAGATGTATCTCAAACAGAATTGCATGCAACTTTTCATAAAAGAC
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CCCAGAATATCTCCTGATATGATCTCATGATGCCATGGGAAGCAGTAAGTCTTTTTGAAAAAAAGCACTGTTTCACTTA
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CAAACGTGTTGTTGCATATGGCAGGATTAACTTCTTTTTAAAGGCTGAATAGTATACACACAACCACTACATTTTCTTT
ATCCATTCACCTATCAATGAACATGTAGTTTGATACTATATCTTGGCTATTGCGAATAATGCTTCAAAGAACATGGAAT
GCAAATATCTCTTCAACATACAGATTTTATTTCCTTTGGATATATGCCCCGAAGTAGAAATTCCAGATCATATGGTAGT
TCTATTTTTAATTTTTTGAGGAAGCTTCATACAGTTTTCCATAATGACTGTCCTAATTTACATTTCCACCAACAGTGTA
CAAGTGTTCTCTTTCCTTTACATCCTTACTAACACTTCTTTTCTTTTGTCTTTTTGATAACAGCTATTCTAATAGATGT

Fig. 9.99

GAGGTGATATTGTGGTTTTGATTTGCATTTCCCTGATGATTAGTGATGTTGAACATTTTTTATCTACATGTTAGCCATT
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AGGATGGTCTCGATCTCCTGACCTCGTGATCTGCCCGCTTCAGCCTCCCAAAGTACTGGGATTACAGGCATGAGCCACC
ACACCTGGCCCCCTCATTGGTAAATTCTACCAAACATTTAAAGAAGAATTAACACCAATCCTTCTTAAACTCTTCCCAA
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CAACAGCGTACTAAAAATACTAAAAGGATGATATACTATGATCAAGTGAGATTTATCCCTGGAATGCAAAGATGGTTCA
GCATGCTCAAATCAATTAATGTACTACATCACATTAATGGTAGGATTAAAAATAACATGATCATCTTAATAGATGCATC
TTAATAAAAGTTTTTGAAAAAATTCAACACCTTTTCATGACAAAAACTCTAAAATACATTAGGTATAGAAAGAATTTAC
CTACATATAATAGAGGCCATATTTTTGACAAGTCTACAGCTAACTGAATACTCAGTGATGAAAAGCTGAAAGCTTTTTC
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TATATAATTCTATATACTAGTCATATATACTAGTATATAGAATTATATATACTATATGTATGTATATATACACTAATAT
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TATTCAAAACTCTTTGAATTTCTGGTTAAATAAAAATGCCAACTATGCCTTTTTCATTAAATAAGTCTATCTTTCATTA
TCTAAATGTATGTCCTACTATAAGTTCCCAATGGCAGCTATGTCCTTGTGCTTAGGGATTGCAAGATGAAGGTTAACTA
TTAACGACAGTGTTTCTGAACCTGAAGTTATTAGAAAATCTTTAGGGACTCCTTGGACTCTTGGAAATTATGTACAAAA
TTATAATGACTCATTTGTACAGTCATCCCTTGGAATCTGTAGGGGATTGATTCCAGAGCCAAATACCAAGACTGCAGAT

Fig. 9.100

ACAAAACCCAGTGGATGCTTAAGTTCCTTACATAAAATGGTATAGTGTTAATATTTAACCTATATTCTTCCATACACTT
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GAATTCTTGATCCTTAGAAACTGTGTGAGGTAAGAGATATTTGTTGCTTTAAGATGCTACATTTGGGGATAATTCATTA
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GGTATGAGGTGATATTGTGGTTTTGATTTGCATTTTCCTATGATTAGTGATGTTGACCACTTTTTCATATATCTGTTGG
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GTCTTGATATTATGTTTGCGTAAATAGCTTGGTCTGATCTTGGACACTAAATTCCAATCCAGCAGGTTCTATCTGGAAG
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TAGGGCAAGACTAGTTTGGGATCTTATGTGTCTAATTTATATAAATGTAGCAAATAGTCTTTTTGATGGTAAGATAAAC
TAGTGAATTATCTCTAACATAATCAATAAATTTTCTTATTGCTGGGTGTTTCTCAACCATGGTTTCGCATTAAAATCAT

Fig. 9.101

CTAGCGAGCTTAACCGCCCCCTCCCCAAAACACACACACATACACACACACACACACACACACACACACACACACACAC
ACACACACAATTCCCAAGCTGCTCCTAGGTCATTTATACCAGAACTCAGGTTAGGACTCAGGCAATGGCGTTCTTTAAA
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GATTGGTAGTGAGTAAAAATATATGTGTGTCTAATGTGTAAGTCTCAAATTATTAACATTTCTCAACAATGTATTTCCA
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CAAAGGTTTATGAAAACAATATGCTTCATTATTTGTTCACATAAAAAGTAACAAAATTAGCTTCCTGTTAAACAGAAAG
CCCATAGAGTAGAAGAGAAAAGGGTCTGGTTCCTTATTCACTCCCAGCTACCGTGAGGGTGTCTTATTGCCCAAATCCA
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GCCCTGAACTACAGAGTTAAAAGTAATGTTTTTTCTACTGTAATCACATCGCAGCACATTATCTGAACCATTTTAAAAA
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TCCTTCTATGTATTGTCCATTATAACTTTGTAATTTCCTTTTGGGCAGGATCCTGTGATTGGTAAATTTTTGTTTTCCA
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CAGGTTAAGTAAATTTATTTTGGTTAGATGTCTTCTAAGCATCAGTTAAGGATTCAAACCAAGGCCTCTCCCATGTGAA
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TAATATCAATGTCCTAGGTCCACAGGAAGGCAAGAAGTAGACTTAGCAGTAAGTTGCTGAGCAGGAATTCTGAAAAGGG
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ATTTATGGAATTTCATGATGCGTTAAATACTTTGGCTGAGTAGCAAACACATTTCATCTAATCTTTCAATTCCACAACA
GTACTACTGGGCAACATTTTTATTCTTGGTGGATACAATTTCTTTCTTTTTTTTTTTTTCTCCTTTTATTCCTTCCTCC
TTTTCTCTCTCTTTCTTTCTTTTAAATGTTTGTGATATCAGGATATAAAGAGCCAGGTAGAAGAGCACAGAATTAGAAA
CCAGAAAACTGAGTCCTAGTCATCTCATTTCTCCTGGCTTCACTTTTACCCTTAAGTGAGGAGACTATACCCGAGTTCC
ACCTAGCTTGCAAATTCTATAATTCAATTATTCCATCACCATTCTGAAATATACCATGTAATTATAGAAATTACTAGAA
AATTTTTTGAAATACACATTTCCCAAATTTATTTGACCATGGAATACTTTTTAAATAATTATATATTGGTAGAACATAT
ACGATAGTTCATGGATATAATATGCACTTTGATTAAAGAATACAAAAAAATGGTCTGCAACAATTAATTGCTTCAAGAA
ATGATTAAAAAATTCATTCATATTCTAACTTAATTACAGGACCAAAACAATAATACAAATTAAATAGATTAAGTCATTT
TATTTTTATTAAGTACATAAAAAAGACAAAAATGGATGAAATGATGACAAGTTGCATAACATGGAGCAGTGATGATTAA
GAGGCAGTGTATACCAGTAAAATTAGTTGGTAAATACTACTAATAGATACTTAGCATTGACATTAAAATTAATATTTAT
ATGAAGCTTTGACATTTAATTCTACTTCATGCATTCATGATACACCCAATCACTTGTTTTGCAATTATTTCAATGTGGA
TTCTTGCATAATAACAATTATAGATGTGTGTTTAAATATATTAAATATATTTTATAAGAAACAATGTTGTTGGTAATTT
TTCTTCTTAGACTACTCAGTATCTTATAGTTTGAGAAAAACAGACCTATCTGAACCTAGATACTATATATGTTTCCAAC
GAGTAGCCTATTTTTCCCTTCCTTTTCCTCTATTGCTCACGTGCTTACATGCATTATTATTGGGTTATATATTGAGTTA
TTCTCTCGTTGGCTTTTGTATTCTGTGGCATTACATATCTTTGATAGCAGTAAGTTTGACACTCAAATTTTGTAGAAGT
CAATGGCAGTGGTCCTTTTATAGGTTTAAACTTACCTGACTGCATTATATCCCTTGAGAATAGTTTTAAGGGATTTTCA
TTGAAACTACTGTATATGATTAACATATAATGCCTCCTATTATGAACTTGGAATATGCACATTAAAAGAGTTATAAGTT
ACAGTTAATCATTTGTTCATTGCTTTCTTTATAGATCTTGAGAAAAACCTGATGAGTGTAGCATTGCCATTTTGTAACT
AATCCTTCATGTAATGAACCTAAGCTTCCATTATTGTGAATGAATTAGTCTATTTAGGAACCGCTTTGGCTTAGCGGTG
AACTGTATTTCCTACTTAAGGAGCCAAACATTAGGAAGCAACTGTAGCAGTGTACAGCAGCAACTTCATCATTTTGGAA
TTTTAAAATTCTACCTTCAGGGATCTTAGAACCATCCTAGCTTCCGAGATCTCACTGTGAGTACTGGAGTGAGCAGAGT
TGTACCAGGATGGAGAGATTGCTAATTTCCAAAAATGGGATTACTGAGTTAAAATATAATCCTGCTTTCAGCTAAAAAC
AAAAAAACCCCAAAAAACCAAACAGCCCTTTATGACACAATTTCACTATCCTGAACGCAATTTTATTTCATTGATTATA

Fig. 9.102

AACAATGTGAATGTAGATACCAATATTGCAATTATGACTAATAATTGGAGGCAATTATTTATAGTAGTTATATATCAGT
ATATATATTTACCATTTATACTGATATTAATGACTGTGGCTTTTTAATAGTGGCCACAGAAGTCACATAGCATGGTTTA
GTGAAGTTTGGTTCACATTTGTAGGCACTTCAGAAATATCATCTTTGAGAACACACACACACTTAAGTTCAGTGAGAAC
GTATATAATTCAAAGAATAACATAAGCAATGATTTAAACTTCTATGTATGTTTCAGTCTGCCTCAGTGTTAGCAGCAGG
AAAATTATTCTTTACAATAATGAAAGACATTTCCAGATTCAAAAAAAAGGGAAAAATAAAAACCATGGAAATAATATAT
TTGGAATTACAGGGCTACTAGCAATCTAAGTGTTGTGGAAAATCTTGGTAAATAGTTCAGTGAAATTATATAGATAGAA
GATTGATTGAATAAACCTACTCCAAAGCATTGATATGCCACAGCATTCTTCCTTTGGCTGTGTTCTGCCCAATATTTTA
ACAAGGGGTTGCATCAAAACAGAGTGATGCTGATCAACTCCTGAAAAATATTTAAAGTTAAAAGAAATGCTAAGCAAAA
AGAACAAAGCTAGAGGCATCATGCTACCCAACTTCAAACTACATGCTACAGGAATACAGTAACCAAAACAGCATGTTAC
TGGTACAAGAACAAACACATAGACCAGAGAAAAAGAATAGAGAACCCAGAAACAAGACTGCATACCCACAACCATCTGT
TCTTTGACAAACCTGATAAAAACAAGCAATGGGGAAATCATTCCCTATTCAATAAATGGTGCTGGGACAACGGGCTAGC
CATATGCAGAAAACTGAAACTGGACCCCTTCCTTACACCATATACAAAAATAAACTCAAGGTAGATTAAAGAATTCAAT
ATAAAAACCAAAACTCTAAAAATCCTGGAAGAAAATCTGGGCAATACCATTCAGGACATAGGCACAGGCAAAGATTTCA
TGACAAAAATGACAAAAGCAATTGCAAAAAAAAGCAAAAATTGACAAATGGGATCTAATTAAACTAAAGAGCTTCTGCA
CAGGAAAAGAAAATATTAACAGAGTAAACAGCCTACAGAATGGCAGAAAATTGTTGCAATCTATCCAGCTGACAAAGGT
CTAATATACAGCATTTATAAGGAACTTAAATAAATTTACAAGAAAAATACAACCCCATTAAAAAGTGGGCAAAATACAT
GAACAGACACTTCTCAAAAGAAGACATTCATGTGGCCAACAAACATATGAAAAAAAAAATCACTGATCTTTAGAGAAAC
CCAAATCAAAACCACAATGAGATACCATCTCACACCAGTCAGAATGGCTGTGATTAAGAAGTCAAAAAACAACAGATGC
TGCTTATGGAGAAAAACGAATGCTTTTACTCTGTTGGTGAAAGTGTAAATTAGTTCAACTATTGTGGAAGACAGTGTGG
CAATTCCTTAAAGACCTAGAGGCAGAAATATCATTTAACCCAGAAGTCCCATTACTGGGTATATACCCAAAGGAATATA
AATCATTCTGTCATAAAGACACATGCACGTGTATGTTCATTGCAGCACTGTTCACAATAGCAAAGACATCTAAATGCCT
ATCAATGACAGATTTGGTAAAGAAAATGTGGTACATATACACCATGGAATTATGCAGCCATAAATAAAGAATGAGATCC
TGTCTTTTGTGGGAACATAGATAGGGCTGGAGGCCACTATCCTTAGCAAATTAATGTAGGAACAGAAAACCAAATACCA
CATGTTCTCACTTATAAGTGATGATCAGAACGCATGGACACATTGGGAGTGGGGAAACAATACACACTGGGGCCTTTCA
GAGGGTAGGAGGGTGAGAGGAGGGAGAGGATCAAGAGAATAGCCAATGGATGCTGGGCTTAATACCTGGGTAATGGGAT
GATCTATGCAGCAAACCACCATGGCACAATTTACCTATGTAACAAACCTGCACATCCCGCACATGTACCCATGAACTTA
AAGTTGTAAAGTAAGAAGAAAAGAACTTGTCTAGATGCAAGTTAATCTGAAAAAAATTTATATTAACTGAGCACACTCC
CAGCCCCAATAACATAGGTGTTTTTGTTTAGCAAGGAATAAGAAAAGAATGGATATTGGGTGGATACCTAATAGTAGTC
TTTGTCAGACTGAATCGAGCAGATATAATAAAAAAGGAATGTGTGACAATGCTATGGTTTAAAAATAACATGATACCCA
GCACTTTGGTAGGCCAAGGAGGGTGGATCACTTGAGGTCAGGAGTTCGAGACTAGCCTGGCCAATATAGTGGAACCTTG
ACTCCACTAAAAATACAAAAATTAGCTGGGCATGGTGGCAGACACCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGA
AATTACTTGTACCTGGAAGGAAGAGGTTGCAGTGAGCTGAGATCATGCCAGTGCACTCCAGCCTGGACAACAGAGCAAG
ACTTCATCTCAAAAATTAAAAAAAAAAAAGATAGTCCAGAAATAACAAGACACAATCTAACAGGAAAGAAAGGTTAATT
TCTTATTTAGGCTTTAAGAAAAAAATTTTAAAAAGCAGTAGCGCAAGTACAGAAAGACCTCATTCTCATAAAAATGGTA
GTTAATTGCAAGTACTGTATCAAATATGTGATAAGTCTATCTAAAAATCTTCTAAATTGAATCTTTCTTGAGGGAAAGA
AAATCAACATTAATTGAAATATTATTGCTCAGACAAGAAAGGTAGCAGTAGTTCATTGTGCTCAAACAATTGTCAGACC
ACCTATGGAATATCCTGTACAATGAAAAATTACAAGTTTCCCAGAGTGTGTTCTTCAGAGCAGTAGCTCTTAGAACATT
AATGATTATTATGAGAAGGGAAGGTCTATTGTCAAAGAAGCTTGGAAAGGATGAGTTGTTAAGCAAAAGGTGTCTTTTG
AGCAGTACTTTTCATGGTCTTTAATATACCAATATGCATTGCAGCTGTCCAAGACAGGAGGCCATTAAGGAAGCCTGAA
GAGAAATGTCCCACCTTAGTGTCCTGAAAGGATATGCACTCCTCTATAGCTATTTACTTTTTACTTTCATCCCCTGACC
TTTCTTCCAGCACTATGGTCCTCTCTTCATCACTTCTCTCTATTTTGATTATTTTCTTCTCCAGTGGCTCCTAACTTCT
TTCTACAAATGCATTTGCTCTGTCTGATAAAAATCATTTTAACTTTGCTTCTCCATCCAGCTACCTTCTTTTTTTACCC
TTCCTGTTACTGCTTCTGGTATTCGATGGTTTTTCCTTTTCCCTTCCCCCATTTTTGAACGATAGACTACTTTTTTTCA
TAGCTCATCTTGCACGTTAGTCTTCCATGAGATATGCCTGTAGGCATGCACAACTAGAGATGTTAAGTAGAGGCAGAAA
GAAAAGAAAGACATCTGGCAATTAGATCTGACTTTATCCATTCTGGCTGTTATAACAAAATAGCATACACTCAGTAGCT
TACGAACAATAGAAATTTATCTCCCAAAGTTATGGAGGCTGGGAAGTCCAAGATCAAGGTGCCAGAAGATTTGATGTCT
GGTGAGGGTGTGCTTTCTGGTTCATAGTTGGCACCTTATAGTTGTGTCTACATGGTTAAAGGGGCGAAGGGTCTCTCTT
GGACCTCTTTTATAGGGCCACTAATGACATCTCAAGTGCCCCATCTCAAAATATTATCACATTAGTGATTAGGTCTTAG
AATATACATTTTGAAGGGACACAAACATTTAGAGCATTCCAAGGTCTTATTTGTTTTTCAGTGGTTAAGAGTTTCGTCA
GGGAGGAGGAGTAGAATTATGTGAGCTTACTTCAGAGCAGAGTTTACTAATCTTCTATGTGTGTGTATGGAGTGGGTGT
AAATCCTGAATCCTTTCAGTAAGAAGGGTACACCTATGAATGCCTTCTCAGTACACTTGGCCCTCTGTACCCATGGGTT
CTGCATCCTGGGATTTAACTAACCATGGATCAAAAACTTAAGAGAAAAGTTTGCACTGGACATTTACGGATGTTTTTTT
CTTGTCATTATTTCCTAAGCAATACATTATAACAATTACTTACATAACATTTACGTTATACTAGGCATTACAACAAATC
TAGAGATGATTTAAAATATATGAGAGGATGTGAATGGGTTATAGGCAAACACTATGCCATTTCCTATCAGGGGCTTGAG
CATCCATGGATTTTGGCGTCTGCCAGAGGTCCTGGAAGTAATCTCCCACGAATACTGTGGGACAACTGTATAATAGTTT
TTTGTTGTTTTTAGTTTGTTTTTGGAGACAGGGTCTGCTATATCACCCAGGCTGGACTGTAGTGGTGTGATTGTAGCTC
AGTGCAGCCTTAAACTCGCAGTCTCAAGCGATCCTCCTGTCTCAGCCTCCCTAGTAGTTAGGACCACATGTGTGGGCCA
CCACCTGGATCATTTAAAATTTTGTTTTTGTGGAGATGGGGTCTCTACAAAAGAGATGTCACTTAGGTAGGTCTCAAAC
TCCTGGCCTCAAGTGATCCTCCTGCCTTGGCCTCCTAAAGTGCTGGGATTACAGGCAGGAGGTACCACACTCAGCCTGT
ATAATGTTTATAAGCACAAAATAAAATTGTAGAATTAAAAATGAAACCAGTTGTATTAAAACAAATTATACAAATATTA
AAATAAAAAATTTGGTATAGTTATATATGTGCATCTTTATTAATGTATTAAATCATAAGATCCAGCAGATCACATATCTA

Fig. 9.103

ACATACTTAATTTTGAAGTGCTTGCAAGAAGTCTAATGAGATAAGAAGGTATCTATGATTTTTACTGGCAACAAAGTCA
CAAACTACAGTGGTTTGGTAACTATATTCATAATTGAAGAAAATGGTATTTTTCAGTTACAAGTTAGTAAAAATACAGA
TGTAAACTTGTCATACAAGTTTACCAATCTCCTGAATTCTTTGTGGACTCCAGGTTAAAAACTACTAAATGGTAGAGTA
TATAGTTACAAGGAGTCAGATTTAAGCTCATTTTAAGTATATGTATTATGTGTATGTAAAGCCTTAATAATTAAGATGT
CCTAGAATGAAAGGATTTTCTCACAAAGTAGTGATCTACCTGTTAATGGAAACGTCCAGTTAGCATCTAGAAAAAATATT
GAGGATGTTGTAGTATAACACTAATTAATATTAGCTAGCATCTACTGAGTGCTTGCTGTGTTTTATGCACTGGGTTAGG
AGCAATTTTTGCATTGTGTCTTTTTTTTCATGATAGTTACGTCAGGTTATCTCTGTGTCATAGATAATACAATTTAGGT
TTTGATATTTGTTAGAAGTTGACTATAGCCTGCAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCACTTGAACCC
AGGAGGCAGAGTTTGGAATGAGCCAAGATCACACCACTGCACTCCAGTCTGGACAACAGAACGAGACCCCGTCTAAAAA
AAATTAATAATAAATAAATAAATAAGTTGACGGCAATAAGTGGCAGAGTATGAACTCTAACCCATATCTAGGTGTCTCC
AAAGCCTATAATTGGAGAATATTTTGATAATAATGTAGGAGAGAGATTGGTGAGAGAATTAGAGATCACCTTGTTCATC
CTCTTTATTTGATAGATATGAGGACACTGAGAACTCAAAGAAGTTAGGTGACTTACTCCAGGTTACACAGTTTATAGCA
GAGCCAGAAATTGGACTTTGATGCCTTTTTATGTGGAAACATGAGCTTTTATTATTTAGCTCTTCATCTGGTGGAAGTG
GAACACAACCTGAAGAGAGAGGCAATGGACTACACTATGGTTTGGAACAGAGTGTATAGTAATTTCCTATTTCATTTAG
ACAACAGGGATATGCCTGAAAGTGCCTTTACCCATGTCATGCATTTATTCACAATGAACACAAAATTTACTTGAGTAAT
TTTTTTTTTCTCGAGGTATAGTCTCGCTCTATTGCCCAGGCTGGAGTGCAGTGGTGCGATCTCGGCTCACTGCAACCTC
CGCCTCCTGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCTACTTGAGTAATATTTTAAATGTAACCATAGTGAACTGT
CCAATACTAAAATTTGTGCCTTTGATAATATTTATATTATGAATAAAAATATGCTCTTTTAACCATGTCCTCATCTATT
TTACCAGAAAGTATCTTGTGTATTGTCAATACAAAGTATCTAATGCATGAATGACTGAGTATGATTGTCTGGTTTTCTT
TAATCACTACTTACACCAAATAATTGGGTATTTACAATATACTGATTCTATTATTTTTTACTGAAATATAATTATAGTT
AAATTTACCATTCGTTAACAATGAGGGAAGAAGTTGTCTAGATTAGTTCAAAAACCAACATGTAAATTCTTTCTGGAAT
ACGGTAATACATAAATGAATATGCAATAAAAGTGTGAAAACAATTTTTAAATAAAAACAGTTAAATTAATTTCTAAAAT
ATACAGGGATTACACTAACAAATTTTCCTGAGTATGAAATTTAGGAAGCATGCTTTTCTAAAATGAATGCTTTTTAACA
TTATTTATAAACAAATGTTGTTTCTAATATTTTATATAGCCTACATGCAATAGGTGCTCAATAAATACTCATTAACTTA
GTTCAAGATGTTGACAGAACACATGGTTTTTGTTTTCCTTTACTTTTCCTAATACCCATTAAAATAGTAGAAAAACTAA
ATCTGTATAATGCACAACAATAAAGAGAATGGGGAAAAGGCCATCAGTGGTAAGAGATTTTATCGAATTTCTGGAAGAT
GAAATATGAGTGAGTGGTGTTGATTACTGAAGCAAAACAAAGTCAATTATTGCAGAGAATATTTGTAGAGGGAGCTACA
CCCAAGAAGAAGCCCTAATAACATGGCAGAAGCTAACAAGGCTCCAGTTTCAGATAAGCCAATGCTGATGGACATTGAA
ATGAGAAACATAGATGTAATCAGCATTTTGATCAAGAGCATGTGCACTAGTTTTTGCTGCCCAATGAGCCACTTTAAAT
CATAATGGCTTAAAACAACCATTTATTTAGTTTACTATTCTGCCTAGTCAGCCATTTTGGCTGGGCTTATATGGGCATA
TTCCTGTGTCTTTGCTCAACCAATCAGTTGATCAGCTCTGCTTCTGCAGGTTGGTTGGGTGTCAGTTAGCAAGATAGGG
GCCACTAGGCCTTGCAAATCTCATCAGACTAGTTTGGGATTGTCACTTAGTAGAGGAGCAGGATTATAAGAGAAATAAT
ATAAACGCAAGATCTCTTAAAGTCTAGGTTTAGAATTGGCACACATTAACTTCATTCTTGCATTGCTTGACTAGGTTAT
AAGACCAGTCCAGATTCAAAGGATATCGCAACAGACTGTTATTTGTTGATGAGAAGAACTACAAAGTCACATTGCAAAA
GGGTGGATACAGGGAAGGTATAAATCTTGAGCATTTGTGGGTCTAACACAATGTAGAGGGCCCAGCTTTATCCTTCTCT
ACTTACCACATCTGTTCTCAGCCCCATACTAGAATACGTGGCATGAAGCCAGGTATTTACCATCACTTCAACAGAAGCG
AAAACAAAGCAAAACAAAGTTTATTTAATGAAAACATTAAATGAAAGAAAATAGATAAAATATATTTAGGAAAATCTCT
TGGAAAGAGTATATTAATAGATTAGAGAGTGTGAATGAGGTTTTGGAAAACCTTGAGGGTGTAAATTGATGCTAGAAAC
ATCCTTCTCTGAGTGGCCTACTAATTCTGACATAGGAATCAGAGAAAAGGAAATGTAATCTTAACTATTTCACTTTGCA
GAAAATAATCTTTACATAGTCATAAAAATGAAAACCCTGTTTATAGTTTCAACTTTAGAATTGCTCCATAGACAAGTC
ATATAAGTCTTAACTGTGTATCAGTGTAAATGTTTTCAAACTTAACAATATTAAAACACCAACCTGGGACCCATAGGCA
CAGACATATCTTTTACATCTTTGAAATTTAAAGCTCAATGTGATGGTCTGTGTCTTGACTCTATTTAGCCAAACCACTG
TGTCATCTTTTACTAATACTCTTTCCCCATGATAGTAGCCCCAAGACAAGTAAGCTGGTCTAGAGGCTCAGTGGATGTT
CAGTGACAGTGCAAGTCATCACCCTTTACTTTTTGCAGATACCACAAAGCTGTTTTTAAGAGTCTCTTGCCATCCTGCC
TATGACTTTGTGCAGTGGAATCAGTTGAGTTCATGGGAAAGCAAATAAAAGGATGGTCTCTGTTTATAGACATAGCCCT
GTCTTAGAAATCTAATCTCTCTTATCACTCTCATCTACAAAGACTGTCAAGGAAATGTGTCCTCTCCTGCCCATGGAGA
CAGATTGGGCATCTCACATGAAAAAATATGTCCTTTGAACTTGCCTGAGAAATTCCAGTAACTTTTTTCTCACCAGGAT
ACTTTTCTACTGTAAGCTTGCCAATATTTGGTAATCTCTAGAATAGGAACCCATCTCAATCAGCAGTGCACACCATCCT
GTTTTGTGCAGTCTAAGTTTAGAGCTGTCTAAGTCCATTTGAGCTGCTACAACAAAATGCCATAGACTAGGTAGTTATA
AGTATCAGAAATTTATTTCTCACAGTTCTGGAAGCTGGGAAGGCCAAGGTCAAAGCACCAGCAAATTTGGTGTCTGATG
AGGGCCCACTTTCTGGCTTATAGATGGTGCATTCTACCTGTGTCCTCACATGGTGGAAGGAGACAAGTCAGGTCTCTGG
GGCCTCTTTTATAAGGGCACTAATTTCATTCATGAAGGTTCCTCCTTCATGATATAATCACCCCCCAGGCCCTACCTTC
TAATATCATCACATTGGTGATTAGGTTTCAGCAGATGAGTTTTGGGGGAATACATTCAGGCTGCAGCAAGGTCAAAAAG
AATATTGCATCATTTTGCTTTAGAGACCTTTCTGTTCTAGCTACATTTTGATTATCTATATGACACAATAAAAAAGAAA
GTCAGGAAACCTAAGATCTTATACTTCAATAGAGTTTTTATAGGACAACATTGATTAATGGCTACAGTTAATACAAAAA
CTCTAACAGCAGCAATCAAATATTTCCATTCATCACACTTGAAACTTGGCCTCAGGTCTATGGTATTTTGAAATTTTTT
GTTGTTGTTTTGAGAGTGACATGAGTGCAGGCCCAGCTTCATGGATATACAAACTATACATTCACATGGGTTCCACACC
TAGATGGGCTCTTACATCATGTAGCTGGTCCTACCTGGGAGAGAGCTAAAAATTAAGTTGCAGTCATCAAATTACTGAT
CAGATACTGAAATTAAACCTGAAAGATGTTGAGAACCCAGAGAAATTCTCAATCATGTTAATAATACTTTCATGCATTT
GACATTTCTTTTTTCCTGCCTCTTCTCTCTACCTGTAGAACTTTTCAAGTTCCATTATTATACCATTGTTGGCCCTTTG
TTTCCTCCTCCAAAGACTTAAAGAAGAAGTTATGATTAAGCATATGAAATATGCATACCAGGTTTTCTATAAAGATTCC

Fig. 9.104

TCGGCATCTCTGCCAAGCTGTCATATGAGCACTTGCATGTTGTTATATAAAAACACATATTTAAATAAATTTAGTGC
TGTTCTAAGCAAAAAGCACATATTTTAAAAATCTGGAGTTTTCTGTTTCAATTTGAGAGAACTACATTTTGCTTAATTA
CTATTTAAATCACTGTAACACAATATTGATGACAAAATTTGAGTTTGCTTTTTAATAAACTGTCAATCAAAGAAATAAC
ATAGAACTTTGTTTTTCTCCTCTGTTAAGGCATGGCTTAACTGTAATTTACTTGAAAACATTATACTGTTTGACAGGAA
AACAGAACCACCTTGAATTATTCTAACCCATTCAGATTTAAGAAAATGCATCGTAGCAAATTAACTGCTATTTGGTTTT
GATCATTCTGTCTGTATCATAGAAATATGGTTCACTAGTGAATCAATGAGAGATAAAAGGTGATCATGGTCTGTGAGAT
AAATGCTGCCCCTCTGAGTTGCTTCCAACGTAGCCAGCTTCAGTGTATCAGTTAGAGTAGTTAATACTAACTGTTGTAA
CAGATAAATACCCAAATCCCAGTTGCTCAAACAATTGAAGTTTATCTCTCATTCATGCTAAGTCAGTTGATGTTTCTGG
TTCACCAGCTGCCTTCCACCTGGTCACCCAGACACCTGGGTTTCTTCCTATGCACCTGTGGCTTCATTTTCCTCTCAAA
CTTCAGACTTCTCTCCCATCAGTATGTGAATAGGGAACCCAGAGATGTTTCCTATGAGCAGGCCCAGAAGTGGCTTATG
TTGCTTCCATTTACCTTACATCTACATGTCTATACAAAAGAAATGTGGTCTAGCTATGGGCCCAGGGAAGAAGGAATGA
ATTTCATTGACTCTCTGCCACTCGCTGCTTAAGGTCAGATGATACTGCACTCTATCCAAATCAATTTCTTTTTGTAATC
CTTAAAACAAATGTGTTGCATCCATATTATATTTATAACATATGTCTGTTTCTTTTGGACAGTATTATTCTGTAGACTT
CTTGACTGATACATCCCAAGATCATCTTTACTGACTTAGGGTTACAGTTTTGGATAAGTTATCCCAATCTCAGGAGTTT
AATATGCCTTATTGCAGATCTTTTCCAACTTCTAGGTAAGAAGTAAACTCATTCCTAATCTTACTACTTGGACATAGTC
TCTCCCTGCTACCATGTCCTCACAGGACCTCTTCCTTGGTTCAGTATTGCAACTATCTCCCAGTTTTCCTCTTTCATCT
CTGGCTTCTCCTTCTTTATCTCCCTTTTAACTTCTATTTGACCATTAAGTGTTGGCAATGCCTCAGGCGTGGTCCTCCT
TTTTATTGCCTTACACTATACTTCCCATGCCTCTGATTTCAATGATCACTTATATACTAAGGACTCGCCAATTTGTATA
TTCAGCCCATATTTGTCCTCTGGAACTCAGACCTGTATATCCTACCGCTTTTTCAATATCTTCCATTGAGTGTTTCAGA
GGCATTTTAGATCCAAAATATCCAAAACTGAAATTCTGTTTTCCCCTCACAGCCTGCTTACTGCGACCTGATTTTTCTC
TTGTGGCCCTTAAAACTATGAATATCAACAGTCATCCAATTCTTCACCTTCATCTTCCTCCCTCAGTTGCTGTAAGTAC
CCTATCACTAAGGCCTGTCGATTTCACCTTCCAGTTATGCGCTGCATCTATCCCTCTCTCTTCATCTTTCCCGGGGCCG
GCCTGTCTGTGCTGGCATTACCTGTTTCCTGAACCACAGTGATAGCTGCCTTGATCCATTTCCTGGCATCTGCTCTTGC
CCCTCATCCAATCTGTTCTCCATATTGCAGTCAGTCACCTGTTTGAAACAGAAGTCCAACCTTATCACTCACCACACAC
CCTTGCCTTAAAACCAGTTAGCGGTTTCCCATTGTTCTTAAGACTATTAACGTCATTTTTGTGTGATTGTCCAGGGGCT
CAATAATCTGAATCACACCTTGTCTCCAGCCTCCTTTCTGCCTTATCCTGAAGTATCCCCTGCCTGTTTCACTCCCTCA
GCTTCTTGTACACCGACTTTCCACCCAGTGCCTCAGGGCACTTTCTCATGCTGTTCTCTCTGCCAGGAACACATGCTTC
TGCTTTTCTCTCCCCTTTACCTAGTGAATCCCTCCTCATCCTTCCCATCTTTGTAAATTCACTTCAGTTTAGAAGACTT
CTCTGGACTGTTATATTGTCAGAACTATCTTCTATATATGCTGCAGAAGTATACATACGCTGCATACTTCTTTCACTGT
ACTTATCAGATATGAGTAAATGTATAATTTAATGTAAATGTGATTAAATTGTTAGTCTCTTTTATTCACTGAATAATGT
CTATTTGCTCATCACTGCATCAGTAGTACCTAGAACAATGTCTCACACACAATTGAATCCAATAAGCATCTTTGTTCTC
GGCAGCTCCTCGTTTTTTAATCTTAAGCCCTACCCTACCACCTAGCACAGAGAGAGTCTAAATAAGTATTTATTTAGTT
GAAGTGGCTGTTAATGGCTAGTGTTTAAATATATTCATTTGAAAGACATATTTCACAAAATTGCCTTGTTGGCCAGCCC
AGTTTGACTCCCAATAAAAAATACAAGTGTGCCATTTTGTTTCAGACAGACACATAAGGTTGCTATTTAGAAGGAGGGT
TTTTATTGATATATTAAGACTGCCTTGAACATATCAAGTTAATTTATTCCCATTTCATTTTTTAGCCATCTGTTTGTTT
CTAAAGGAACAAAGATTTGGTAGAAGTGGTAATAAATACTCAGATAAAAAATCTATGTAATAAAATTTCTATGTAATCT
TCAGCACTTACTATGAAAAAAAATAAGTAGATTATGGCAGAATAAAAGTAAAATATTTTCTGCTTGATATTTAGAGTGT
TGTTTTGGCATCTGTGACTTGTGCTAATGACCTCGGGTTTAAGTTTGGTTTTTATTGTCTGAAGATAGCTGGATTTGGG
AGAGTAAGTCAACAACCTTTTTTTTTTTTTTAGCAAAACTCTAAATGTCTGGATGATCTGATAGATGCAATTCACTATT
CGAGTCAAATGTTGAATATGTATTACAATTTAGGCTGTTCTTGAAGCTTTATTAAATTGAGCACCAAATCTTCTGAAGC
TAATGGAGGTAAAATCATAGTCAAACGCCCCTTTTAACTCAAAAGAACCATGCCCCCAACTATTTCTCTTTCTCAAACTA
TTGCTTCTTTCAGGCTAGGATATTTGGGATATTAAAGGGCTCTTTTAACTCAAAATAGCAAAACCATAGCCCTCATCTT
CTTATTTAGGAAGACGGTCTTTAACATTTAATTCTGAGCACTTACCTTTTCCGTAAATGAAATTCTGTTTCTCATTTGG
ATATTGGCAGAGAGCCAAGATAAGGTGAGCATTGAGCAGGATAAACTAGATGATTCCTTAATTCAGCAAATATATTTTG
ATTCCAATTGTGTACCAGAAATTCTTCTAGGTACTGGGAATTTATCAGTGAACAAATAACATTTCTATCCTCACAGAGC
TTACATTCTGAAAGATAGGTAATAAATAATTATCTATCTATCTAATTGAATCACTCTTCTCTCTCTCTCTCTCTGTCTT
TCTCTCTTTGTCTCCCCGCTTGGGTCTTTCAAAGACATTTCTGCAGGAGTACAGCTATGAGCTGTTTAGCAGTCAGTAC
AACCTCTGGAAGATGGGTGTACCTGCCCAATAAAGGGGATCTGAGAAGACCGTCAGTAGCATCTACTATAGAAGATAAA
TGCAGTATTCCAGGCAGGAGATTATGATGGCTTGGACTAGGGTGGTAGCTGTGTTTACGGTGAGAAAGATAAGATCTGG
ATATATTTCTAAGGTAGATTTCACAAGTTTGCTGCTTGATTGAGATCAGTTGCAAGGAAAAGGAAAGTCAAAAATGACT
ATATAAATTCTGGTCTGAGAAACTGTGCAAATAGAGATACTGTTTACTGAAATGGAAAGGGAGAGATCAAGATTTTCAT
GTTAAATTTGGTACATTCATTCAGATATATCAGTGGAAAGATAGGCAGTTGGTTATGGTAGTCTTGAGTTCAGGTTGGT
TTTACAAATCTAATTTGGGTATTGATGATTTTAAAACTGAGGAGTTACCATAGATAAATAGGAAAAGCCACTCTAATGT
TTTGAAGTTGGAAATTCAAAAGGAAATGGAGCTTTTGAGAAGGAGCAGCTGGTGAGGCAGAAATACAACCTAGAGTGAG
GAAAGGCTTGGAAGTCAATGAAGATAGTGTTTTACAAAGGAATGCATGATTAATTGTGAATGCTGCTGATTACTTAAGT
GAGAACTGAGAATTGACAAATGAATTTAGCACTGAGAAGACCTTGGATGATCTTGAGAAGAGCTGTTTCAGTGGAGTAC
TATAAACAAAAACATAGGAGTACATTCAAGAAGAAATGGTGGGAGGGCAAGAACTGAATATCATGAGTTTGGAAAACTC
TTTTGAGGAGTTTTACTTTAAAGAATTTAGGCAGAGAAATAAGATATATAGTAGTTAAGACTTAAATTGGACATATTAT
GGCAGGTTGCTATGTAAATGGGAAGAATCCAGAGAAGAGGAGGAAATTAGTGATGCAACAGAGACAGTAATAACTGGAG
TGATATACTTGAAGAGGAGAAAAGAGATGATATCAGGCACATAAATGGAGGATTTGATAAATGTGATGGGGGCTGCAGA
GAAAAATTGTTTTCTGATTTGCTATTATTTTTTTCAAAGAAATAGGCTATCAACTGAGTGTGAGGATAGAGCAGAAGCT

Fig. 9.105

GTTAAAAATTTAAGGAGAGTTGTGAAATAATCATCTGTAAGCAGGAGTGTGAATGAACTAGGAAGATGTAGTAATATTT
CTGGACAGCCCTGAGAGCTGAAATATTGTAAGAAATAATCTGAGGAAGTTCTGAGTACTTAGACAGTTGAGGTTAGGGG
GAGCATTTTATTAAAACAATCACAAAGAACATGGGAAAAACAGATACCAACTTGGCAATTGTCATAGTATTAAATAAAA
CTAATTTTGGAAAATTAAACTAAAAAGATGTTATATGCATTATGATGTTTCAAAATAGACTAGGGCCAATCAGACCCAA
TAGTTTCTTTATATAAGACCCCATAGTTTAATTATATAATTAAGTGTTACGTTCAAATTTTGATAAATGATAAATATAT
TGTACCACCATGGGAATTTGAAAATGCGACCATTTGTACTGGGATATTATCATGTAATATTTTAATTTTACCTCTTAAT
TATCAAAGTGAAAGATTTCCATGCAGTATTATTTGGTTGTGGGGTAATTGTTTAATTTATTTGGAATTTTATAGTGCTT
TTGCTTAGCCACATTTTATTTTGTGGTCAAATTCAAATGCTGATCTAATGGCTTCAGAGTAAAATGAGAAAGGTCAAAT
GGGACTGGAAATTAGGGTTTTCTTCCTGTCATTAGGTATATTTATTTATAAAATAACTGGAAAATTCCTCATGTATTTA
ACATCTGTTCCTTCTTTCCCTGGTCACTGCATATCAAGAAGACTTTGACATTGAGGTTTGATACGGTTTGGCTCTGTGT
CCCCACCCAAATCTCATCTTGAATTGTACTCCCATAATTCCCAAATGTTGTGGGAGGGACTCGGTGGGAGATAATTTGA
ATCATGGGGTAAACTTTCCCCCATACTGCTCTCATGGTAGTGAATAAGTGTCACAAGATCTGATGGTTTTATCAGGGGT
TTCTGCTTTTGCATCTTCCTCATTTTCTCTTGCCACTGACGTGTAAGAAGTACCTTTTGCCTCCTGCCATAATTGTGAG
GCCTTCCCAGCCATGTGGAAGTGTAAGTCCAATTAAACCACTTTTTCTTCCCAGTCTCGGGTATGTCTTTATAAGCAAT
GTGAAAATGGACTAATACAGTAAATTGGTACCAATAGAGTGGAGTGTTGATGAAAAGATACCTGAAATGTGGAAGCGAC
TTTGGAATTGCCCAACAGGCAGAGGTTGAAACAGTTTGGAGAGCTCAGAAGAAGACAGAATAATGTGGGAAAGTATGGA
GCTTCCTAGAGACTTGTTAAATGGCTTTGACCCAAAGCCTGCTAGCAATATGGACAATAAGATCCAAGCTGAGGTGCTC
TCAGATGGAGATAAGGAACTTGTTGGGAACTGTAGCAAAGGTGATTCTTATTATGTTTTAGCAAAGAGACTCACAGCAT
TTTGCCATGCCCTAGAAATTTGTGGAACTTTGAACTTGAGAGATGATTTAGGGTATCTGGTGGAAGAAATTTCTAAGCA
GCAAAGTATTCAAGAGGTGACTTGAGTGCTGTTAAAGGCACTCAGTTTTATAAGAGAAGCAGAGCAGAAAAGTTTAAAA
AATTTGTAGCCTGACAATGTGATAGAAAAGAAAAACCTATTTTCTGAGGAGAAATTGAAGCTGGCTGCAGAAATTTGC
ATAAGTAACGAGAGGCCGAATGTTAAGCCTTCAAGACGATGAGGAAAATGTCTCCAGAGTATCTCAGAGGTCTTCACAG
CAGCCCCTCCCATCACAGGCCTGGAAGCCTAGGAGAAAATGGTTTTGTGGGCCAGGCCCAGGGTCCCCGTGCTGTGTGC
AGTCTAGTGACCAGGTGCCCTGCATCCCAGCCACTCCAGCTGTGACTAAAAGGGGCCAAAGTACAGCTCGTGCTATGGC
TTCAGAGGGCAGCAGCCCTAAGCCTTGGCATCTTCCATGTGGTGTTCAGCCTGCAGATGCACAGAAGTCAAGAATTGAA
GTTCGGGAACCTCCGCCTATATTTCAGAAGATGTATGGAAATGCCTGGATGCCCAGGCAGAAGTTTGCTGCAGGGGCAG
GGCCCTCATGGAAAACCTCTGCTAGGGAAGTGTGGAAGGGAAATGTGGGGTTGGAGCCTCCACACAGAGTCCCTACTGG
GGCACTGCCTAGTGGAGCTATGAGAAGAGGGCCACAGCCTTCAGACCCCAGAATGGTAGATCCAATGACAGCTTGAAGC
ATGTGCCTGGAAAAGCCACAGATACTCAACGCCAGCCCATGAAAGCAGCCAGTGGGAGGCTGCACCCTGCAAAACCAAA
GCAGCAGAGGTGCCCAAGACCATGGGAACCCACCTCTTGCATCAATGTGACCTGGATGTGAGACATGGAGTCAAAGGAG
ATCATTTTGGGGCTCTAAAATTTGACTGCCCTGCTGGATTTTGAGCTTGCATGGGCCCTGTAACCACTTCGTTTTGGCC
AATTTCTCCCATTTGGAATGGCTGCATTTACCCACTACCTGTACCTGCATTGTCTCTAGGAAGTAACTAGCTTGCTTTT
GATTTTACGGGCTCATAGGTGGAAGGAACTTGCCTTGTCTCAGATGAGACTTTGGACTGTTGACTTTTGGGTTAATGCT
GAAATGAGTTAAGACTTTCAGGGACTATTGGGAAGGCATGATTGGTTTTGAAATGTGAGGACGTGAGATTTGGAGGGCC
CAGGGGGGAATTATATGGTTTAGCTCCGTGTCCCCACCCAAATCTCATCTTGAATTGTACTCCCATAATTCCCACATGT
TGTGGGAGGCATTTGGTGGGAGATAATTAGAATCATGGGGCAGTTTCCTCCACACTGTTCTCGTGGTCGTGAATAAGTC
TCACAAGATCTGATGGTTTTATCAGGGGTTTCCACTTTTGTATCTTCCTCATTTTCTCTTGCCACCAACTTGTAAGAAG
TGCCTTTTGCCTCCTGCCATGATTGTGAGGCCTCCCCAGACACATGGAAGTGTAAGTCCAATTAAACCTCTTTTTCTTC
CCAGTCTTGGGTATGTCTTTATCGCCACATGAAAACAGACTAATACAAGGTTATTCTATGAGTTAGAAATAATTCCTCT
AAAAGTAACACTTGCTGAGAATTTCCCTACCTTTTCTGGGCTTTTAAAAATGCATCTTATTCCTCATCCCCTAAAGTGG
GTGTGTTAGTCAGGGTTCTCTAGAGGGACAAAACTAATAGGAGATATATATATATATATCTCCTATATATCCTATATAT
ATATAGTATTAACTCACATGATCACATGGTCCCACAATAGGCCTTCTGCAAGCTGAGGAACAAGGAGAGCCATTCCGAG
TCCCAAAACTGAACTTGGAGTCCAATTTTCAAGGGCAGGAAGCATCCAGCATGGGAGAAAGATGTAGAGTGGGAGTCTA
GGCCAGTCTCATGTTTTCACATTCTTCTGCCTGCTTTATATTCTAGCTGTGCTGGTAGCTGATTAGATAGTGCCCACTC
AGATTAAGGGTGGGTCTGCCTTTCCCAGCCCACTGACTCAAATGTTAATCTCCTTTGGCAACACCCTCACAGACACACC
CAGGATCAATACTTTGCATCCTTCAATCTAATCAAGTTGACACTCAGTGTTAACTATCGCAGTGGGTAAAAGCCATTAC
TAGGCAACCCAACCGTTGCTGCAGGTTGATGCAGCAATGAGTAGGAAGATGTGGTGGGAAGATGTGGGAGTATAAACTT
CGCCAGGCAGTAATATAGGTATATAATACATGAGCAGGGCTGCAATACTCTCTTAGGAACTGGACAGCTTTATGGGCCA
AACCAAACCTCAAAACCCAGCTGCCCACCTGACACAAGACTGTCCATGGGAGTGAAGTTCTGCAGGGTTCTTTCCCATC
ATTATCCCAGGGGAAGAGTTACTCTAGAGAATGCCCACTTAAAAGGTATGTGAGTCTGACTCTGCAGATCACCCACTGT
CTACACAGCTCTTGTTTCTGAAGAGCTGTCCTTGCATTGTCAATACCTTGGTGCAACATATGTGGCTTCCTGCCCTTCT
GCCAAGTGGACCTCCTCACTTTGAGCACATGGTAAGCATCCTCCATAGGTACACAAAGTTTGTAGCAACTAACTCCTAT
CTGGAGTTACTCAGACCCACTACCTCTCCTGTTAGTGCATCTATGCTCTTCACAAAGTACAGTAAGCTCTGCTTCACTT
GTCTTGAAAACATGAATTTGTTCTAATGCAATGGACATATTGGAGAAGAATTTGATGAACAGCTAAAAAAAGCAATAGT
ATAAATAATTTTCATGGCTCTACATGTAACCTCTGGAATGCATAACAATGCTTTTTTCCATAAGAAGATGTTTTTCTGT
GCTTGTAGATTATTCTTTAGACCTGTAAAGAATGCTTGGAAATAATTGATGAAGTGCCAAGTCCACTAAGTTTCTGTT
TTTAGCTTCTATCCTGAAGTTTCTCATATTCTTTACCTTTACATCTCTCAGTGTGAGCTCATATGAATCTGTGGCTTCA
GGTCCCATGTATATACTGATGACACCCAAATCTCTTCTTGAATGACCAAAGACCAAACTTTCTGAGTCACAGATTTTTA
TTTACATCTGAATGTACCCCTAGTATTTTAAATTTCTTAAATATAAAAGTTTAATATTTCTCATACCCACTTATGTATA
TGCATGTGTGAGTGTGAGTATGAGTGTGTGTACCACATATACTTACTATGTGTGTTAGGCATTGTCCTATATGTTTCAT
ATCTATTAACTCATTAATTCCCCAAACAGCCTTATGAGTTAAGTCTTCTCATTATGTCCTTATAATAAATGAAGAAACT

Fig. 9.106

GAAGCCAAGGGATTAAGTAACTTATCCAAGGTCAATGAAGGAGCTGAGATTTAAATCCAGAAAATCTAATTCCAGAGGA
CAACCATTTTCCAAACATCATGCAATCCAACAAGGTGAAAGCCTGTAAGGATTATTTCAATTCTTTATTTGAATCTCTG
CTTCAGCAAGCACATTCACTGGAGGAAAGATATCCAGCCTTTGGTTACAGAGAAGGCATGCTCTCAGAAGGCTCATATT
TGGTTTACAGTTACTTGCTCATTGATTTTTGTGAGTTCCTGAAACTTACAGAACTTTCTTAGGTGTTCAGTCAAATTGT
AAACTATTATATGAATAGTGTCCATCATAGTTTTCATATGAACGTTAACCAAGGCCTCTCAATCACAGGTGGAACATGT
GAGCATAAGGTTAATATCATCAAGTAACTGGTGATAAGGCTAAAATGATGGATGAAAGTCAGATTGTGGAATACCTTAA
AGGGCAGACCAACAAGGTTTAAGGACTTTATCTTGCTGTTGGTAGTAATAATTTTTTGTACCAGGAGTTTGCCATGAGC
TTCAGACCATGTTTCAGGAAGAATCAGTTGGGCCTGTGTGTGTAGTTCCTGGATAGTAGAGCATGCACAGACCTTGAGT
GCACTCACTTTAGGGGTCTTACAGTCTGGTGCTGTGGTTCTCCAACTTTAGTGTGTATCAGAATCTCTTGGGGAAACAT
GTTATAATATCCTGGGAGGGCTTCATACCAGGACTCCGTCTTCAGAGATTTTGTTTCAGTGGAAATGGATTTAAAAGGC
AGTGAGCTGCATTTTCATAAACACCACTCTTGAAGATGATAATGCAGGTTGTTTGAGAAACACTGATCTAGTGGCTGTG
GAATTGATGTAAGTGTCAGGCAAAAAATGGTCAAAAGTAGGATAGTTGGAAAGTAAGAGGTGGAATTTCAATTCTGAATG
GCCATTTGAGCCCACATGTTTTATTTATTTATTTATTGCAGATTCTCAGTAAACACACACACACACACACACACACACACA
CACACACAACCTACATCCATCCTGAAAAACAGGAAAGGTTTCCATGCAGAGGTCAAAAACTGTGACGTATATCTGCCAT
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AAAGCAAGTGCATGGGATTCCTGAGAAAAACTTCATCAAACCCTCAAGTGTGAAGTAGAGTAACTGGAACAAAAGCGGA
AGCATGACAGTCAGCATAAGTAAACCTCAACTTAAACAGTCTCAAGGAGCCAGAGGTCACCAGATAAGCCGCCTAGGGA
AATGGGTTGACTGAGTCTCTTGCAGTGATCAGTTCAGGATAGGACTGCTTAAAGTAAGAAACTATGAGAGTTAATGACA
GAAACTTGTTTGGGTAATGCTCACTTTTAGAAAATAGAGAAAAGACAGTCAACAGAGCTGATAGGAAACTTGAAATCTA
TGCAGTGGCCTAGAAACAACAACAACAAAAGGAGTGATTTTCAGGAGAATGTGGTTAAATTGCCACAAGATATACAAAT
GTCAAACAACATGAAGATAAAGAAAAGATCAATTGTTTGGCAAGTTGGTGCTCATGTCATCTTTGTGAGAGATTTCAGC
AGAGTGGTGTGAACAGAAGTCAGATTGAGGGGGTGGAAGAAATGATTAAGAGATGAAGAAATGAAGTCATCAAAGGTTC
AACAGTCTCTCTGTGGTGTGTGTGTGTGTGTGTATGTGTGTGTGTTTGTGTTTAGTAGCAAAAAGGAAAGAGGGTTGGT
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CCAGAAAGAATAGTAACTATTCAAGATGGCGAGGAGTAAGGTGATGATTGATGATGGATCATGTGTTGTGGGATCAGGG
TCTCTTTAGAGTTAATATAAATCAAATTTCAGGGCCATGAAGTAAGACAGTACATTCATATTTTATTGTAGTTAATTAA
TTCTCTTAAAAAGGGAATATAAAGGGAAGGTAATAGTTGCATATTTATAGATTGTAGTCTAATATGAGCTGATTTATAA
AATGTTGGCATTATGTTTTTGAGGTGGTAGGATAAAGAAAAGAAAGTGAAAACTTTAAGTGTAGGGTTGAGTTTATCAG
GAATGTGTTTGATATAGACTTGTGAGTGGTAATCTGGAATATATCTAGTATCTAAAGATACTAAAGAAAAACAAAGGGC
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GTTACTAGAACCATTCCTTTGTTTGGAAAAAGTGTTAGTTACTCTTAAATAATTTAATGCCAAAACAAAATACAACATT
AACTGAAAAGGAGAATATAAAGTTATATCAACACTATAATTATAATTATTTAAAATTACTTATGTTGTGGATAAGAGTT
GGAAGGAAATATTTTTTTTTTTAGAAATATGCAATTTTGGGTAATGTCAAATTATTTTTCTTCTTCATAATAATTTTTG
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TGATAGATGCAAACTGGTGTTCAGTTGATTATAATATATTATTTTTGCATTCCAGATGTCATTTCCTATGGGCAATGAG
TTTGCAATTTCCCAAATGTAAGAATTTAATTTTTTCCTGCTCTCGTTTCTGATGTCTTTAAGATCTTTGATTTTTTTTT
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ACTGGTGGCACTATATGGCAATGGGGGGTGTCAGTAGGCATAAGGGGGTTACCCTTATTAACATCTTTGGAAGCTCAGA
ATTAAATCTATGTAATTTTTATATGCTATTGCTCCTCCTATAGAACTCTGGGTCTCAACCTTTTGTCTGTGGGCAAAAG
TTCACATGCACAACACCATCTAGGTTGGTCTGTGTTGCACATGGCTGCTGAAGATGTAAGAGAGACTGTGGATTCTGTG
CTGTTTCTCAGGCCCTCACTATAATCCATCGTTTGCCCTCCCATAGACTTGAATTATGACAACCAGGCTGGGACTCATG
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CATGTCTTATCTGTAAATAATGTTGTTTACTACAAAGCATAACCTCCAACTTAAATCTTCTATACTAAGTTGTGAGCAA
AGAATTGAGCACACAACAGCAAGATCTAGGTTACTCCTTTCCCCTCCATTCACGTAAAATCTTATGTGAATGAGTATGT
GATTCAGTTACTGAATCAGTAAACTGGTCAATAATTCACTTATTTCACCTAAGAAGAAACATATTCTTTTTTTAAAAGCA
CTGAATATTATATTGATGTTGGTATTATAATACAATGGAATTGTGTCTACCTAGTACCCTTATTTCTAGATCTCAAGTG
ACTAAACAGCCTGAATCTGGAAATACAGAGAAAAAAATACACAAAGAGTCGTGAATTTAAATAGCAATTCTGTCACTAAC
TGGCTGTTTAATTTGAGTGTTTTATTTAAGCTGTGTAAATCCAGGCTTCTCACTGAAAAATAGAGATAATACATAGATT
ATAGCATTATATTGTGAAAGACACAAGATAGTGAACATATAGTTCTTTGCCCTGTATCTGGTACATAGTAGGTGCTCAA
AATTACTAGTTTTTTAAAAATAATTATCCTCATTATTTGGTGTCTTCAATGACCTTCTTACATAGTCCATTATGATAAT
AAATGCAATTAATTTTTTGTTCATGACACCCTGAAGGTGTTTCTGTGTCAGATTCACTCAGAGACCTCATGATGAGGAA
GGAACATGGTGGCGAATCTTACCCTGGTGATGCCAAACACAGCAGTGACTCATAACCATTCCAGCACTGCCTATGAAAT
GGATCAATTAAAGGACGGTGACACACAAAGATGGCTACTTCCAGAGGGAGACCTTGGAAATTCTTTTATGTTAACAGTG
TACCCCACACAAGAATAGGAGAACCACATTCTGTCAGTACACTGGGGAAGTTTTTTCAAAATATCTCTGGACTGTGTAG
ATTTCTGGTAATAGAAAATATGATCTGCCACTTCAATCTACTGAATACTGTCCGTTTTTTTCTATATAATGGCTTTTAG
GAACTGTTGTGAGGCATCCTAAGTATTATCTAGCCATCCATCCATCCATCCATCCATCCATCCATCCATCCATGTATCT
ATCTAATCTATGTGATTATATGTGTAGAGCTTATTCATACATATATATATACACACACATACATACACACATAGTTATA
TGTATTTATACACACATATACATATAATGTCTTTATCAGCCTGAAGTATGGATTTTTAAAGTGGTAATATTGCCTTACT

Fig. 9.107

TATTGTTTCTCATCCACTGTGACATTCTATGTTATTTCAGTAAGATTTAACAAGCAAAGTGATGATGGATGAGAGTTCC
TTTGCAGCCTGGTGAGATTTTTACTTCATGTAAAGCAAAGCATTTTGGGGCAACATCAGGGATAAACTTGTGGAATGAA
TCATTTGGTTTTTCTTTAGTATATCCTGTCCACCATTGGGAACCAGATTCAGTAATTATGTTCTCTGGTTTGTACTCAT
CATAATGTCTTGACCTCCAGCTCTGAAACAACATATTTCCTGAGAGATGCTGATTGTATTTTGTGAGGTTCTGCAGGGT
CAAGTAAATTGAGGATGTCTTTATTCTGCATTTGACTAATCTGAATTAGATAGTCTTAGCCATTAAAACTTTAGAAAGC
ACATAATGACCAATTACAAGTGAGAGAATTTTTTTCAATAATGCTTTATATTTTCTAAGTACCGATACAGATGTTTTAT
TACATTTAAAACATGATTGCCCTACCACTTCACTTATATTTTAAAAACTAAGTTGCCATCTTGTAAAAATAAATACATG
GATATCATTTACAAGTGATATCAGTTAATACCTAATGTGAACATCCATTGTGTACTGAGTCTATGAAATACTACTAGTT
ACTATGAAAATGTGAGATTCACCGAATCGGGTGGAGCATCAACTTTATTATCCACATAGGTTACCCATTTCTTATATCA
TAGCTTTGGTTGTATAATTTATTTCAACAGAGTTTAGTTAAACATTTTCCACTGTTATTAGGTACTGCCACTCTACATT
CCAGTAAATATTGCCACCATGTTGCAGAACAATTTTTGGACAACCAGGCATATCTTTGGAGTTGAACTATGTGGAGGTA
CTACTGGTGCTGTGAGGGATCACCTGTAAACCTGGCAGTTTTAGGTGGCCTCTAGACGTTATAGGGTCAAGGGAGAAAT
TTTTTTTGTTCTTGTTGTTTAATACTGTGAGTACATTTAAATGCTCATGTAAAAGAGCCAACTTAGAGGGAGTGGTTGA
AGACACAAGAGAGATAAGAGCTGATTGTTATGGCAAGGTCTCTGGCTAGGCAGAAGTGAATGGGTCGAAGAGAACAGAT
TTAGGAACTGACCTTCTATCAGGAGAACAATATTTCTTCCAATGTCATGGGGGAACATAGAGACTCAGGGGGTCTGTAA
CCATGTATGGCCCCCAAAGGACTGGACACATGGTGAGCAACTATGGTAGGATGAAGGGAGGCATGTTAGGAAATGTCCA
GCTCCGAGGCCTCCACGTGACCCCTAGGTGAGAAGCTGCCATGATTCCTTAATAGGGAGCAACACAAAGACTAAAATGA
TGGCAATGTAAGGGTTAAGGAAAAGGTGATTTTAAAAGCTTCTTGAGGGTAAAGTCCATCTGTGTTCACTTTTGTGATC
TTTGTTGCATCCTTCTCAATCTTGCATATTGTTGATCTCAAATAAGTTTATGGTATTTATTATGTTCAAAAAAGTTACA
GTTTCTTAAGTTTCTTCTATTTTCTTAAGGAAGGAGGTGATAGGATGGAGGGGGCATGATGCCAACTTGACTCTCCTGC
TTAGGACTTGCCCTTCTTTTAAATGGTGAACACAGAGTTACATTATTTAATGCATAATGTGAAAGTGACAGAGGCCCTG
ATTATTGGAGTATAAAATTTTATATTATTATGGAGGCTAAAAAGTACATGACTGGACTTTTTCATACAATAATTCAAAG
TAAGCCCATGGAACATCCTCTTCAAATGAAGTTGACGTACGTCTCATCTCCCTGGATTGGATGCCCAACCCTCACCCTT
GAAAGCAGCTTGTGGATAACTCAGGGCAAACAGAAGCAGAACCCTCATGAACCTTCTCTCTTCTGGAAATTTTGGATGG
CGTTACAGAATGAGGCAAAAATAAAGTTACCTTCTTCTCTTTTCTTGGATTAAAGATCCCAGAGCCATTCTCCTCTGTG
TTCTCTACTTGGACCTTGTATAGTGTAGGATATAGCCAGGAACTAAGGATCCTCGGTTGACTCATAGTCGGCAGAGGGT
GTTATGGCCCTCCTGAGAGAGTGACCTTGAGGAGAGAATCTATTCAGATGGTTTTATGACAAGACCAAAGTAACATTTC
TTAGTTACCTCTTAGCCAGAGTTTAGTGTTAAGTTTGCCCTGAAGTATAGTTTTCAAAATAATGAGATCAGGCATATGC
TATTTTGACTAAGTAGAATACCCAATAAAATAAGTCATTCAAGTTGTGACTGAAAGTTCGGATGGTCCTTATGGAATCA
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CAACCCCATACGACCCCACACAGTTCAAAACAGTAGTGGTTACTCACTCCATGGAGAAGATGTCAAAAGTAAAAGGAAT
AATACATTGGTTATGATGTCTGAAATTGGGCACATAAGCATTTAGTTTTGTTGGTGAATAATGTTCAGAATGAAAATTG
ACACACTCTTTGGATTATCAAGCTTTTTAAAAAGTATAATTAATCAGTTTTTTAATGAAATATACAGAAATATAATGGC
AGCTCTTCTATTAGTGAAGTTTCCTGAGGCAGCTGGATTGATTGAAGGCTTTACCTGGTTCATTTGGATTCTACTTGTA
AAGCATGAAGAAACCAACTTTAGGGTCAGGAATTTTCCATAAGTCAGGTTTTTTTAAAAGCCATATAATCGATGCAGA
TATCAAAACATTAAGATGAGATAAAAATAGCTTTTAATCAAGTAAGTTAAATTAAATAACTGTTAAGGTTCAAATCATG
AATTAAATCTAGATGTTTGGCAAAGACAAAAATCTTTATAAAAGGATAAAATAGTCTGGGAATAAAGTATTTGTCATTC
CCATATCAAATGAGAACAAAACTAATAATTTTATTAACTTTAGGTTTTTATTGTATTAAATAACATCATTTTTATTTAC
TTTATCACAAGGTATATTTTTCTTTATTATATGTCTTTGTAGAAAACCTAGTAACATTCCTGTGTGACTGAATAGATTA
ATCACAGATATACCCATCTGGAAAAATGCATGCTACTATAAGAGATGAGTGAAATATATAAAATTTATATTTTAATTCT
TATGCTAATTAGTTAAATGGGGGAAGATGTATGTCCAGAATATTTGCTCTTAATAGGACATCGTAGTGAAAACCATTCC
AATGATGATGACTAATAAATGTGTATCTTCAACATTGTATAATGCCCAGGAATATTTCCAAATAAAGAATTTCTAGGTA
AGATGTTTAACAAATATATGATACTTTTGTTTTCTGGGTGAATGTTCAAACTAATTTCCTGGGGATCATTGTGCTCAGT
ACTTATAGTATCATTAATATTATTGTTGACATATAATAATAACCAAAAATATCCTGGTCAGATAGGTTTTTTCTTTTTT
AGCTGATTCATAATCATTGTACATATTTATGGGGTACAGAATGATATTTCAATATGCGTATACAATGTGTAATGATCAA
ATCAGGGTAATTAGCGTATACATCACCTCAAACATTTGTCATTTCTTTGTGTTTTGAACATTGAAAATCCTCTCCTCTA
GTTTTTGAAAATACACAATGGATTATAGCTAACCATGTTTACCCAACAGAGCTACAGAACACCAGAACTCATTCCTCTC
ATCTAGCTATAATTTTATATCTGTTAACCAACTCCTTCCCATCCTCCTCTTCCCCCATCCTTCCCAATCTCTAATACCC
ACAATTCTACTTTACTACCATGAGCTGAATTTTTTATTTTAGCTCCCTCTTATGAGTGAGAATGTGCGGTATTTATCTT
TCTGTGCCTGACTTATTTCACTTAACATAATATCCTCCAGGTTCATCCACATTGCTGAGAATGACAGGATTTCATTATC
TTTTTGTGGCTGAATAGTATTTCATTGTGTGTATATACCACATTTTCTTTATCTATTTGTCTGTTGGTAGACATTAAGG
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CTTTCCTTTGGATAGATACCCAGTAATGGGATTGCTACATCATATGTTAGTTCTATTTTTAGTTTTTAAAGAAATTTCC
AGATTGTTTTCCATAATGGCTATACTAATTTACATTTGCACCAACAATGTATAAAAGTTGCCTTTTCTCTGCATCTTTG
CCATCATTTGTTATTTTTTCTTTTTCATAATGGCCATTCTAACTGGGGTGAGATAATATCTCATTGTGGTTTTGATGAT
TAGTGATGTTCAGCATTTTCTCATATACCTGTTGGCCATTTGCAAGTCTTTTGAAAAGTGTCTATTCAGATATTTTGCC
CACTTTTGAATCACCTTATTTGTTTTTTTCTGTTGAATTGTTTGAGTTCCTTGTATATTCTGGATATTAGTCCATTGTC
AGGTGAATAGTTTGCAAATATTTTCTCCCATTCTACAGGTTGTCTCTTCACACTGTTGATTGTTTTCTTTTCTGTACAG
AAACTTTTTAGTTTAATATAGTCCCATTTGACTATTTTCGTTTTTGTTGACTGTGCCTCTGAAGTCTTAGCCAAATAGT
TTTTATTTCCTTCAAATAGCTTTGGCATTTGAGTACCACTTCGCTCATTCCAGAAAAGCAACCACCCAACCAAAAGAAT
AGGTTTTTAATTTTTTTTTAATTATTATTATACTTTAAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTACATA

Fig. 9.108

TGTATACATGTGCCATGCTGGTGTGCTGCACCCATTAACTCATCATTTAGCATTAGGTATATCTCCTAATGCTATCCCT
CCCCCGTCCCCTCACCTCACAACAGTCCCCAGAGTGTGATGTTCCCCTTCCTGTGTCCATGTGTTCTCATTGTTCAGTT
CCCACCTATGAGTGAGAATATGCGGTGTTTGGTTTTTGTCCTTGCGATAGTTTACTGAGAATGATGATTTCCAATTTC
ATCCTTGTCCCTACAAAGGACGTGAACTCATCATTTTTTATGTCTGCTTATTATTCCATGGTGTATATGTGCCACATTT
TCTTAATCCAGTCTATCATTGTTGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTTTGAATAGTGCCACAATAAACAT
ACGTGTGCATGTGTCTTTATAGCAGCATGATTTATAGTCCTTTGGGTATATACCCAGTAATGGGATGGCTGGGTCAAAT
GGTATTTCTAGTTCTAGATCCCTGAGGAATCGCCACACTGACTTCCACAATGGTTGAACTAGTTTACAGTCCCACCAAC
AGTGTAAAAGTGTTCCTATTTCTCCACATCCTCTCCAGCACCTGTTGTTTCCTGACTTTTTAATGATTGCCTTTCTAAC
TGGTGTGAGATGGTATCTCATTGTGGTTTTGATTTGCATTCCTCTGATGGCCAGTGATGGTGAGCATTTTTTCATGTGT
TTTTTGGCTGCATAAATGTCTTCTTTTGAGAAGTGTCTGTTCATGGCCTTCGCCCACTTTTTGATGGGGTTGTTTGTTT
TTTTCTTGTAAATTTGTTTGAGTTCATTGTAGATTCTGGATATTAGCCCTTTCTCAGATGAGTAGGTTGTGAAAATTTT
CTCCCATGTTGTAGGTTGCCTGTTCACTCTGATGGTAGTTTCTTTTGCTGTGCAGAAGCTCTTTAGTTTAATTAGATCC
TATTTGTCAATTTTGGCTTTGGTTGCCATTGCTTTTGATGGTTTAGACATGAAGTCCTTGCCCATGCCTATGTCCTGAA
TGGTAATGCCTAGGTTTTCTTCTAGGGTTTTTATGGTTTTAGGTCTAACATTTAAGTCTTTAATCCATCTTGAATTGAT
TTTTGTATAAGGTGTAAGGAAGGGATCCAGTTTCAGCTTTCTACATAGGGCTAGCCAGTTTTCCCAGCACCATTTATTA
AATAGGGAATCGTTTCCCCATTGCTTGTTTTTCTCAGGTTTGTCAAAGATCAGATAGTTGTAGATATGTGGCATTATTT
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GTAGTATAGTTTGAAGTCAGGTAGCGTGATGCCTCCAGCTTTGTTCTTTTGGCTTAGGATTCATTTGGCAACGCGAGCT
CTTTTTTGGTTCCATATGAACTTTACAGTAGTTTTTTCCAATTCTGTGAAGAAAGTCATTGGTAGCTTGATGGGGATGG
CATTGAATCTTTAAATTACCTTGGGCAGTATGGCCATTTTCACGATATTGATTCTTCCGACCCATGAACATGGAATGTT
CTTCCATTTGTTTGTATCCTCTTTTATTTCCTTGAGCAGTGGTTTGTAGTTCTCCTTGAAGAGGTCCTTCACATCCCTT
GTAAGTTGGATTCCTAGGTATTTTATTCTCTTTGAAGCAATTGTGAATGGGAGTTCACTCATGATTTGGCTCTCTGTTT
GTCTGTTGTTGCTGTATAAGAATGCTTGTGATTTTTGTACATTGATTTTGTATCCTGAGACTTTGCTGAAGTTGCTTAT
CAGCTTAAGGAGATTTTGGGCTGAGACGATGGGGTTTTCTAGATATACAATCATGTCGTCTGCAAACAGGGACAATTTG
ACTTCCTCTTTTCCTAACTGAATACCCTTTGTTTCCTTCTCCTGCTTAATTGCCCTGGTCAGAACTTCCAACACTATGT
TGACTAGGAGTGGTGAGAGAAGGCATCCCTGTCTTGTGCCAGTTTTCAAACGGAATGATTCTAGTTTTTGCCCATTCAG
TATGATATTGGCTGTGGGTTTGTCATACATAGGTCTTCTTATTTTGAGATACGTCCCATCAATACCTAATTTATTGAGA
TTTTTTAGCATGAAGGGCTGTTGAATTTTGTCAAAGGCCTTTTCTGCATCTATTGAGATAATCATGTGGTTTTTGTCTT
CGGTTCTGTTTATATGCTTGATTACATTTATTGATTTGTGTATATTGAACCAGCCTTGCATCCCAGGGATGAAGCCCAC
TTGATCATGGTGGATAAACTTTTTGATGTGCTGCTGGATTCAGTTTGCCAGTATTTTATTGAGGATTTTTGCATCAATG
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CATCAAATGAGTTAGGGAGGATTCCCTCTTTTTCTATTGATTGGAATAGTTTCAGAAGGAATGGTAGCAGCTCCTCCTT
GTACCTCTGGTAGAATTCGGCTGTGAATCCATCTGGTCCTGGACTCTTTTTGGTTGGTAAGCTATTGATTATTGCCACA
ATTTCAGATCCTGTTATTGGTCTATTCAGAGATTCAACTTCTTCCCGGTTTAGTCTTGGGAGAGTGTGTGTGTCCAGGA
ATTTATCCATTTCTTCTAGATTTTCTAGTTTATTTGCGTAGAGGTTTTTGTAGTATTCTCTAATGGTAGTTTGTATTTC
TGTGGGATCATTGGTGATATTCCCTTTATCATTTTTTATTGCATCTATTTGATTCTTCTCTCTTTTTTTCTTTATTAGT
CTTGCTAGCGGTCTATCAATTTTGTTGATCTTTTCAAAAAACCAGCTCCTGGATTCATTAATTTTTGAAGGGTTTTTTG
TGTCTCTATTTCCTTCAGTTCTCCTCTGATTTTAGTTATTTCTTGCCTTCTGCTAGCTTTTGAATGTGTTTGCTCTTGC
TTTTCTAGTTCTTTTAATTGTGATGTTAGGGTGTCAATTTTGGATCTTTCCTGCTTTCTCTTGTGGGCATTTAGTGCTA
TAAATTTCCCTCTACACACTGCTTTGAATGTGTCCCAGAGATTCTGGTATGTTGTGTCTTTGTTCTCGTTGGTTTCAAA
GAATATCTTTATTTCTGCCTTCATTTCGTTATGTACCCAGTAGTCATTCAGGAGCAGGTTGTTCAGTTTCCATGTAGTT
GAGTGGTTTTGAATGAGTTTCTTAATCCTGAGTTCCAGTTTGATTGCACTGTGGTCTGAGAGACAGTTTGTTATAATTT
CTGTTCTTTTACATTTGCTGAGGAGAGCTTTACTTCCAACTATGTGGTCAATTTTGGAATAGGTGTGGTGTGGTGCTGA
AAAAAATGTATATTCTGTTGATTTGGGGTGGAGAGTTCTGTATATGTCTATTAGGTCTGCTTGGTGCAAAGGTGAGTTC
AATTCCTGGGTATCCTTGTTAACTTTCTGTCTCGTTGATCTGTCTAATGTTGACAGTGGGGTGTTAAAGTCTCCCATTA
TTATTGTGTGGGAGTCTAAGTCTCTTTGTAGGTCACTCAGGACTTGCTTTATGAATCTGGGTGCTCCTGTATTGGGTGC
ATATATATTTAGTATAGTTAGCTCTTCTTGTTGAATTGATCCCTTTACCATTATGTAATGGCCTTCTTTGTCTCTTTTG
ATCTTTGTTGGTTTAAAGTCTGTTTTATCAGAGACTAGGATTGCAACCCCTGCCTTTTTTTGCTTTCCATTTGCTTGGT
AGATCTTCCTCCATCCTTTTATTTTGAGCCTATGTGTGTCTCTGCACGTGAGATGGGTTTCCTGAATACAGCACACTGA
TGGGTCTTGACCCTTTATCCAATTTGCCAGTCTGTGTCTTTTAATTGGAGCATTTACTCTATTTACATTTAAAGTTAAT
ATTGTTATGTGTGAAGTTGATCCTGTCATTATGATGTCAGCTGGTTATTTTGCTCATTAGTTGATGCGGTCTCTTCCTA
GCATCGATGGTCTTTACAATTTGGCATGTTTTTGCAGTGGTTGGTACTGGTTGTTCCTTTCCATATTTAGTGCTTCCTT
CTGGAGCTCTTTTAGGCCTGGTGGTGACAAAATCTCTCAGCATTTGCTTGTCTGTAAAGGATTTTATTTCTCCTTCACT
TATGAAGCTTAGTTTGGCTGGATATGAAATTCTGGGTTGAAAATTCTTTTCTTTAAGAATGTTGAATATTGGCCCCCAT
TATCTTCTGGCTTGTAGAGTTTCTGCCAAGAGATCTGCTGTTAGTCTGATGGGCTTCCCTTTGTAGGTAACCCAACCTT
TCTCTCTGGCTGCCCTTAACATTTTTTCCTTCATTTCAACTTTGGTGAATCTGTCAATTATGCGTCTTGGAGGTGTGCT
TCTTGAGGAGTATCTTTGTGGCGTTCTCTGTGTTTCCTGTATCTGAATGTTGGCCTGCCTTGCTAGATTGGGGAAGTTC
TCCTGGATAATATCCTGCAGAGTGTTTTCCAACTTGGTTCCATTCTCCCCATCACTTTGAGGTACACCAATCCGACATA
GATTTGGTCTTTTCACATAGTCCCATATTTCTTGGAGGCTTTGTTCGTTTCTTTTTATTCTTTTTTCTCTAAACTTCCC
TTCTCGCTTCATTTCATTCATTTCATCTTCCATCACTGATACCCTTTCTTCCAGTTGATCGCATTGGCTCCTGAGGCTT
CTGCATTCTTCACGTAGTTCTCAAGCCTTGGCTTTCAGCTCCATCAGCTCCTTTAAGGACTTCTCTGTATTGGTTATTC

Fig. 9.109

TAGCTATACGTTCGTCTAAATTTTTTTCAAAGTTTTCAACTTCTTTGCCTTTGGTTTGAATTTTCTCCTGAAGCTCGGA
GTAGTTTGATTGTCTGAAGCCTTCTTCTCTCAACTCGTCAAAGTCATTCTTCGTCCAGCTTTGTTCCATTGCTGGTGAG
GAACTGCGTTCCTTTGGAGGAGGAGAGGGGCTCTGCTGTTTAGAGTTTCCAGTTTTTCTGCTCTGATTTTCCCCATCTT
TGTGGTTTTATCTACTTTTGATCTTTGATGATGGTGATGTACAGATGGGTTTTGGGTGTGGATGTCCTTTCTGTTTGTT
AGTTTTCCTTCTAAGAGACAGGACCCTCAGCTGCAGGTCTGTTGGAGTTTGCTAGAGGTCCACTCCAGACCCTGTTTGC
CTGGGTATCAGTAGCGGTGTCTGCAGAACAGCGGATTTTCGTGAACCGCAAATGATGCTGTCTGATGGTTCCTCTGGAA
GTTTTGTCTCAGAGGAGTACTTGGCCGTGTGTGGTGTCAGTCTGACCCTACTGGTGGGTGCCTCCCAGTTAGGCTGCTC
GGGGGTCAGGGGTCAGGGACCCACTTGAGGAGGCACTCTGCCCATTCTCAGATCTCCAGCTGCATGCTGGGAGAACCAC
TGCTCTCTTCAAAGCTGTCAGACAGGGACATTTAAGTCTGCAGAGGTCACTGCTGTCTTTTTGTTTGTCTGTGCCCTGC
CCCCAGAGGTGGAGCCTACAGAGGCAGGCAGGCCTCCTTGAGCTGTGGTGGGCTCCACCCAGTTTGAGCTTCCTGGCTG
CTTTGTTTACGTAAGCAAGCCTGGGCAATGGTGGGCGCCTCTCCCCCAGCCTCGCTGCCACCTTGCCGTTTGATCTCAG
ACTGCTGTGCTAGCAATCAGCGAGACTCTGTGGGCGTAGGACCCTCCAAGCCATGTGTGGGATGTAATCTCCTGGTGTG
CCGTTTTTTTAGCCCGTGGGAAAAGCGCAGTATTCGGGTGGGAGTGACCTGATTTTCCAGGTATTGTCTGTCACCCCTT
TCTTTGACTAGGAAAGGGAACTCCCTGACCCCTTGAGCTTCCCAAGTGAGGCAATGCCTCGCCCTGCTTCGGCTCGCAC
ACAGTGTGCTGCACCCACTGTCCTGCGCCCACTGTCTGGCACTCCCTAGTGAGATGAACCTGGTACCTCAGATGGAAAT
GCAGAAGTCACCTGTCTTCTGCGTCGCTCATGCTGGGAGCTGTAGACTGGAGCTGTTCCTATTTGTCCATCTTGTCTCT
TCCTCGATTTTTTTTCAGGTTTTAATTTTTTTAATTCATATTTGATATTCTTCTTAATGCTAGATGTAAGTAAATT
AGATTTTTCCCTGTTAATATTTTATAAACCATTTTTTCTTTTAATTTAGTGAGAGTGACAGATAGAATGATTTACTCTG
AATTACTCTTCCTCTTGAAAGATTAAAGCTTGCTCTTAAGTAAAGTTTGTTATGCCTATCTGTTTTGTCTTCGGTTTAT
TTTTTTCCATGGAGCTGCTTCTTCCTTCTTACAAAATGAAGTTCTGGAGGACCAACAGGTCACTACATGTATTCATAGT
TATATAAATTCTAGCAATGGTAACAGTTTGGCTCATGTTGGGGCCTGGCTACATGTTCTTCATTCCTGTTTAATAAATC
TCATCTTTCTACCATATGCTAGTAATATATGGCTGGAATGCTGGTATGGGAATTACTCCCCTCTTTGCTGAAATAGTTC
ATCTCTTGTGTCCTTTTCCCCTTTTTATTCTTCTATTCTTCTTAGCCTAAGTGATGGTTGTGATTGAATTCAGAAGTTT
GATATTCCTACTCGGTTCATGTCCACCCAAAAGCAGAGAGGAGCCCATCATCATCATTTGTTTTGAATCTGAATCCCAA
GCAGGAAAAATAACTCCAAGGCTCTTACTTAGGCTGTCGTGTCTGTTCTGTCATGCGGTGAGTCAGCAACACTGACTGC
ATTTATTCTTCTGGGAATTGTTCTTCTAGGAGCTGTAGTAGTCATGGTACCTCCCTGCAGGAGTTCATGAATTAATAGG
ACTCATAGTGCAAAGTTTCTCTGAGAATTTTCTATAACACAAACTCCTTAACTTCCTGGTGGGTAATGTTTTCTGGGTG
TTTTTCTGTTTTCTGTTTTTTTTTTTTTTGTCATTTCTTCTTTAGTAAAATGAAAATTGCAAGTAGAAAAGAAACTAAA
AATGGATTTAGTGTGAGGACAGGTTCCTTTTCCTGGCAGGATTGTAGAACACTGGTATTCAGTTGACTGTTTACAATGA
ATATATCTTCTGGTTGGTCATGGCCAGAAGAGAAAATGTCATTGGTTTGTGCCCAAGCAAATTGATTATTAAAATACGT
TGAATATGACCCCATGGTTGCAAACATCCCTTTTCTTAGTAATTCTTAGAGATGAAGAAAGTCTTTTATCTGTTTTCTA
TTTCAACTTTCTGGGTAATCTCTATCCTTTCTTTTTGATAAGTCTCTGTCTTCCCTCTATCAGTGTGAATAATGTTACT
ATTGAAAAACTGGTTCCCTAGCTACCTCAGTCCTGGGGTCTTAAGGTTTCTTCAAAACGTGACAGTCATGTTAAAATGA
AATTCTCTGAATTTATTTAGAGCACTGTTTGTAAAAGTGTAAGTGTTATTATGCAGCCTTGCTTTCCTACCTACCTGAA
TTCTCTCCCCTACTCTCCCCAACTCATATTGCCAGCAGTGGGTAGCTGGCAGGATGTTTGAAAGATTTCTTCTTCACAA
TTCAAAAGGCTTGGTCGAGTGACAGGATTCATATCCCAAACCTCAACATCACACAATACTCCCATGTAACAAATCTGCA
CATGTACCCACTGTATTGAAAATAAAATTAAAAAAACTAAAAAAAAGCAAAAAAGCAAAAAAACAAAAAACAAAACAAA
ACAAAATCCCTGGTATATATTAAGAGTCCCAGTGACCTACTTCACTTGCAAATTAATGGCCATCTAGAGTGTGGAGTTT
GGTTGAATGATTTATACTGCATTGTGATTCTAAAAATTAATTATTTTTAATTTCTTTGATACTCTAGATCAGTTTTCTA
AGGTAAATGTGAAGTACATCAGTGACTCCAAACTCAATTGAGGTCTCCCGATTTTCTTGGACTGACTATGTATATTTTA
AAGAATTATTTACTTTCATACTTTGCCAAGACCCAGACAGAAAGAAGCTTTCAGTGTTCGTGGCAGCAGAAAAGAATAC
TAATAAGTGTTAGTCATCCACAGTAAATTAAAAATATAATAATAAAGGAAAATTAAACTGCTGTGTGTTTGGGTGTTTG
CTCTATCACCATAAATTCACAACCTCATCTTCTAGTCTCTGAAAAGGAGTGGGTGTGGCAGGAAGCATTTGTGAAATTC
CATTAGCATTTTTAGAGACAATTACTCCACTAAATGATTCAGAATTCAGCTCCTAGCTTCTAAGATTCTACTTAGGCTT
ATGAAGCATTTTATTCTGCAACAGAGTATACATATAATGTAGAATTCCTAGGATTGAAAAACTTGTTAGCTTCCAACCC
AAATTCTCTTACTTTTAGATGAGAAAATGCTGATGATTGGCCTAAAGTCTTATATCTACTGGTGGAGGAGTGGAAATTC
ACTCGTTTACCTTCGCACTGGAGGTAGATTCAAAATACTTCAGAAACGATGTTAGACTAGAGCATAATGCTTGGCCATT
GATAAATAAATAAATGAATATAAGATGTTGTGCCCTGAGATTCAGAATTGGCAGCAAGAATGTGGGTATTATAAAGGTA
TATTTTTCTTCTTGCCTTATTATTGAATAAGAGTACTTGAAAATGGATGAAGGCAACCAGATGTTGAGTCAGATTTCCT
GAGCTTTGAATTTTGGACCTGCATTCATTTCATTTCTCTAGGAAGGTTGCCCCCCTCTTTATTTGTTCAGTGCTTATAC
CAGATTTTATTATACTGGAGATTTCTAAAGCCTCCAACCAAGGAAGATTCCCTGACTTCTGCCTTGCTGCTGCACCACA
CAAATAACCATATCAATTTATATTGCACTATTCTCAACCCCACAAACTCCATTTAGACCTAACAGCTATGGACAGTGGC
CCTAATTTCCTAGGAACATGATCATTTTGTTCTTGTTTGGTGTCTATGCCAAGCTCCAAATCACAAAAAGCTGTTAATT
CCAATTACCTTTTGCAAAATCCATTTTGAAGTCTTCTCACAGATGGATGTATTTAAAACACCTAGAAGGTTAACATCCT
TTGTGAGGCCTCAGCTTTGACTTAGAAAAAGCTCATGCCACAGTGTGTATGTGTGAACCTATTTCCTAAGAGCTGATAT
ATGCCCATGGTGTCTCACTGCAGGGCTGGTGATAAATGATGAAACCATTTAGTGCATAAACTCATATAACCTTTCAGCA
GAATCAATAATTTAGTTGCAATTTAGTTGCATACCTAAAACAATGCAAGGTTGAAGAACCCTGAGAAGAGTGGTAGCTC
CTGATGACAGAAATAGGAGTCTCAGGTATTCTTCTTTTGTTTCCCAAGTGGTATCAAGCATGTGTCTGACTCACTGGTG
CTATTTTACATTGTGAAGGAAGTATGGATGAGGGAAGGCAAAACCAGTGCAAATATTCTAGATCCACTTATTTCCTTCC
CGCTTTCCCTTCCTCTCTTCCCCTCCTTCCTTTCTTCTTCTCTTTTATCTCTTCCTTCCTAAATTAATATTTTTGAGGG
TAGGTAAAATAGCTATATTACTTAAAAGTCAAACTTTATAAAAAGGTAAAGCGGAGATGTCTGTCTCCCAATCCCATCT

Fig. 9.110

ATTCCTCCTTCACCCTGTTCCCCATCTATGAGAAATTATATTTATTAGTGTCATGTTTATTTTTTCAGTGTTTCTATAT
GTAATACTCATTATATGTTATACAAACACAAATATACATATACATAATTTCCTTCCATTTTTATCAATTTCCTTCCTTT
CTCACTGTCCTGCTCCTAGCTTTAATTTTACCAATTARTAAAACATACTAAAGATTTTTTTCATATCAGTGCATGAAGC
TTTTCCTCTTTTTTCTTTCAACTGCATAATATTCCACTATGTGGAAATATCATGGTTTATTTAAATAAATTCTTATCAG
GGAATATTTGAGTTGTTCCAGGGTTTTCTTTCTTTCTTTCTTTTTTGCTGTGAAAAACAATGTTACAGTGAATAACTAA
CATCATTTCTCATTTCATATGTGTACAAAGTATCTGTGGGATAGAGTTCCAGAACTGAAATTGCTGCTTGAAAGGGTAA
ATTGTTTCTGTGGATTTGTAGAAATTTCCAGATTTCCCTTTATAGTAGTTACACCATTTTATAATCCTACAGCAAAGTC
TGAAAGTGTATTTTTCACACATCCTTTCAAAAACATTCAAACTTTGGATTTTTGTACATCTAATTGGTGAGAAATGATA
TACTTGTTTTCATTTTCAATCTATTCTTATAGATGAACCTGGACATATTTTCATAAGTTTAATAACCATTGTTTTTCT
TTCTCGGTAAACCGTATTTCCTTTGCTAATTTTTCACTGGGCATTTGGTGTTGATTTCTGTCAAATCTTTACAAAGTAG
AGAAGTTTGTACTTTGTTTATGATCTGAGTTGCAAATACTTTTATTCCTTCCTTGACATTTATCATTTGCCTTAACTTA
TGGTGAATTTTTACCATGCAAATGTTTTTGATTTTCATGTTGTTCAGTATGTCAATATATTTTATATTCATTACATTCA
TTAGTGGCTAAAACTTCCCAAATGTTGGTAGGAATATGGATGTCTAGATTAGTGAGGCTCAAATGCTCCAGGCAAGATC
AACGCAAAAAATACTTTTCCTAGACACATTAAAATCAAATTGTCAAAATCAAAGACAAAGTGAGAATTCTGAAAGCAGC
AAGAGAAAAACTACTCATCACATGGAAGGGTACTCACAAAGGCTACAAGCAGATTTCTCAGCAGAAACTTTGCTGGGCA
GGAGGGAGTGGAATGATGTATTCGGAGTACTAAAAGAAAAACAAAACTGCCACATAAGAATAATGAGTCTGTAAAAGCT
GTACTTTAGAAATGAAGAGACATAAAATCATTCCCAGAGAAAAGAAAGCTAAGAGAGTTTATTTCCACTAGACCTGCCT
TAAGAGAAATGCCAAAGGGAGTTCTTCAAGTTGAAATGAAAGGACCCGAAGTAACATCATGAAAACACAGGAAATCCCA
TAGCTAACATCATACTCATGTTGTAAAGCCAAAAGCTTTTCCATTAAGATCAGCAAGAAGACAAGGGAGTTCACTCTCA
CCACTTCTATTCAACATAGTACTGGGAGTCCTAGCCAGGGCCACTAGGCAAGAAATGGAAGTAAAAAATATCCAAATTG
TAAAGGAAGAAGTTAAATTGTCTCTATTTGCATAAGGCATGGTTTTTTATAGGAATCTCTAAAAACTTCATCAAAAAAC
TTAAAATTAATAAATTCAGCAACGTTGCAGGATACAAAATTAACATACAAAATCCAGTTGCATTTCTGTACATTAACAA
CAAACTATTTGAGAAAGAAATTACAAAGACAGTCCGTTTACAATAGCATGAAAATAATAAAATACAGAAGAATAAATAC
AACCAGRGATGTGAAAGATCTGTACACTGAAAACTATAAGGCATTGATGAAAGAAATTTAAAAATACACGAATGAAAAC
ATATTTTATGTCTATGTATTAGAAGAATTAATATTGTTAACATGCCTTTACTGTCCATGTAATATACAGATTCAACCCC
TATCAAAATTCCAATTGCATTTTTATATAAAAATGTGTTGGGTACATTATAATTCTATTCTAGCTATTTGAAATATATA
ATAAATTATTGTTAACTATAGTTTTCCTACTGTCCTATCTAATGCTAGAACTTATTCCTTCTATTTAACCATATTTCTG
TATCTATTAACCAACTTCCAGGCTGTGTGTTGACAGTTTTTCTAAGAGTTTTCCCAAGGCAAAGAGTAAGTGGAAGTCA
ATCTTAAATCACTGTGTCTGGCCGTGACCCGTGATAAAAGATTTAATGGAAAATTTCAGTTTAGATGAGGGTAACAGAC
ATTCATCAGATACTGGGTGCTGGAGATAGATTCAGAGCTAAGTAAGAAATCCTATTTTTGAGATTAAGTAATCTCACTT
CACACCCAGTGACACTGCAACTGTTGATTAAGAGTTTTCCAGTCTCTTTTTATCCCCGTTAGCCTACAGGAGCAGGTAA
ATATCTAGTTCCTTCTGGGTCTGAAGATTCTGTAAACTTAAAAGGAGAGATCCTTTCTGATTTGTATATTATTGGATTT
TCTAATGTCCATCACAGCACCGGATTTAACACTCACACACATGCACACACACACAGGATATATTGAATGAGTAAATAAA
TAACAGACAGGAGAGTTGTTACTAACTGATCTCTAATATTACCTTATTGTTCTAATAACTGTGGATTTGATATAACTTT
GGGAGCAAGCAAGGTATCAGTCTTAAAGTATAGACAAATTTACTATGTCACCTCAGATACTCAAATAGAGAATATCCTA
TGCCCAAATGGCAAGGCTGAATTGAYCCAAGTGATTAAGTCATACTCTTAAAACTGTATAACCTAATAACCTTTTATTA
AGAATAAGTTCAGAAAAACAGTTCACAATTTCTTTTTACTTAAATTGTATATATTATATGTGCAGTTTTCAGATGTGAA
TGGGATTTGAGATCAGAAAGGCAGGGCTTCATACTGCATTTCTCCAACTTGCTCTCTATTTGTCCTTTAGCAAAAGACA
ATCTTTCCTTCTTTACTTTTTATTTGTTAAACACACACACACACACACACACACACACACACACACACACACACACACA
CACAACTTCATAGCATCCAATGAGCAGTATCTAGGTACACGGCCAATGCAAAGCACTCATTTTCTTATTTCTCCTTCAC
ATGTTTTTCATTCCTATTTTCCATCTTTGCCATGGACAAGACTTCATTCCCTAGCTGTGGCTTTAGAATAACAGTATGA
CTAGATCATATTCATTTTTAGCTTAGCACATTACCTCCCATTTAGTTGAAATGAATATCAACAAGAATTCACACTTCTA
AATGCTTGAAAGCACAATGTCCATCCAAGATCCAAGTGACTGAAATAATAAGAGCCTTGTTATATGAAGAAATACCCAT
TTTCATGATGTTTTCTGAGGCATTAACTGTTACTCTGAAAAGAAAGAAGAGTGTTGGTAAGACTTGGGTATGAGATAAA
ACAATTAGATATTTGCTTATAAACTGGAATGACCTTGTAAATGGCCCAGGAGCAATGTAATTAAATACCATAAAAGCTC
AGAATTCCATTGTGCCCCCTGGAAACATCATAATTGCCTCAGTCATTAGCTTTCAGGGTTTCAGCCTTAAACCAGGATA
TTTCTAGTCTCATCAAAACTATACATTAGCATTCAGTGACTTGTAAGAGTAAACTTCCTTCTAGATAGTCCTGTGTGCT
TATGAAGTACATCCAAATGAACATATGACATGAGGTGGAGTACAACTTAAAGTTGCCTTCTTTCATCCTATATATTTTT
GTTTATTCTTAATGTATCGTGAACTTCAGTAGAGAGCAAACAAGTTGTCTTTATAATTTGAAGTTTTGCTTTCTCTTTT
TGAAAGAAAACGCATAATTTGGAGATTCCATCTGTGAAAAAAACTTAATTAAACAATGTTAATTTTTAAAATTCTATTA
TGTATAAGGTGTAAGGAAGGGGTCCAGTTTCAGTTTTCTGCATATGGCTAGCCAGTTTTCCCAACACCATTTATTAAAT
AGGGAATCCTTTCCCTATTGCTTGTTTTTGTCAGGTTTGTCAAAGATCAGATGGTTGTAGAGTGTGGAGTTATTTCTGA
GGCTTCTATTCTTTTCCATTGGTCATAAAAACCCTAGAAGAAAAACTAGAAAATACCATTCAGGACACAAGCATGGGCA
AAGGCTTCATAACTAAAACACCAAAAGCAATGGCAACAAAAGCCAAAATTGACAAATGGGATCTAATTAAACTAAAGAG
CTTCTGCACGGCAAAAGAAAGTATCATCAGAGTGAACAGGCAGCCTACAGAATGGGAGAAAATTTTTGGAATCTATCCA
TCTGACAAAGGGCTAATATCCAGAATCTATAAAGAACTTAAACAAATTTACAAGAAGAAAAACAAAGAACCCCATTAAA
AAGAGGGTGAAGGACATAAACAGACACTTCTCAAAAGAAGGCATTTATGTGGCCAAAAAATATATAAAAAAAAGCTCAT
CATCACTGGCCATCAGAGAAATGCAAATCAAAACCACAATGAGATACCATCTCACGCCAGTTAGAATGGCAGTCATTAA
AAAGTCAGGAAACAACTGATGCTGGAGAGGATGTGGAGAAATAGGAATGCTTTTACACTGTTGGTGGGAGTGTAAATCA
GTTCAACCATTGAACTTGTAGATAGACAACTTGTAGATAGACAGATTCCATTGTGGAAGACAGTGTGGTGATTCCTCAA
AGATCTCAAACCAGAAATACCATTTGACCCAGCAATCTCATTACTGGGTATATATCCAAAGGATTATAAACAATTCTCC

Fig. 9.111

TATAAAGACACATGCATATGTCTGTTTACTGCGGCACTTTTCACAATAGCAAAGACTTGGAACCAACCCAAAAGTCCAT
CAATGATAGACTGGATAACAAAAATGTGGCACATATACACCATAGAATACTATGCATCCATAAAAAGGATGAGCTCTT
GTCCTTTGCAGGGACATCGATGAAGCTAGAAACCATCATTCTCAGCAAACTAACACAAGAACAGAAAACCAAACACCAC
ATGTTCTCACTCATAGGTGGGAGCTGAACAAAGAGAACACAGGGACATGGGGAGTGGAACATCACACACTGGGGCCTGT
TAGAGGGTGAGGGGGCTGGAGGAAGGATAACATTAGGAGAAATACCTAACGTAGGTGATGTGTTGATAGGTGCAGCAAA
CCACCATGGCACGTGTATACCTATGTAACAAACCTGCACGTTCTGCACATGTATCCCAGAACTTAAAGTATAATAAGTA
AGTAAATAAATAAGTAAAAAGAAATATGTTAAAAAATTATATTATGTAGATATTTTTGTTATCTTGCTTCATGCCAAGT
GCTTTCATAAATGCTAGACTTCTATTTGTACATTTTGCTTTCATGAGGGTGAAGACAAATAAAGAGTGATCATTCAAAA
ATATTAATGTACGGAAAAGTAAAGTAACTGTAGGGCTTCCATAACAAAAGTACAACAAATTGAATGGCTTAAACAAGAG
AAATGTATGTATTGTCTCACAGTTCTGGAGGCTAGGAGTCTCAAATCAAGGTGCCAGTAGCGTTGATTCCTTTTGAGTA
AGCTGAGAGAAAGATCTGTCCCTGGCCTTTCTTCTTGGCCTGTAGATAGACAACTTCCTTCCCTGTATGTCTCTTCACA
TTGTCTTCCATCTGTGCACCTCTCTGTGTTCAAATACCCTCCAACTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGCA
TGTCACTCACATTGGGTTAGGGCCTACCCTAATGATTTCATCTTAACTTGATTACCTCTGTAAAGACTTTATCTCCAAA
CCAAATCACATTCTAAAGTACTGGGGGTGGGTGAGGATTTCAATATATGAATTCTGGGGAGACCCAAAGCAATCCATAA
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TGTGTTATTTAGAATAATCTAAAAAATTATATATTTTCATTAACATTTAGGTTACCTTCAACTTTGTTTTTGATGTTTT
GTAAGCTGCCCATAAGTGACTTTAATCACTCACTGTATACCACTGACAGATCATTTCTCATGAATTCAGTGATGTGCAC
TTTGAGACTCAGGAAAGAGGGAAACTTGGCCTTACTAAAATCATATAGTTAGTATGTGGCAGAGCTGATATTCAACTCT
ACATCTTGCTGCCTCCAAAGTTAGTGATATATGCATGGTCAATATTATTTTAAAATACTCATTTAGTGCTTGCCTTTTT
AATAAAATGCTGATTTTCCTGATTATAAGTGTAACAGGTGATCACTGAAGAAAGTTTAGGAAAAAACTCAAAACTTATT
CAGATTAATATTAAAATTACTCATAATTTCACCATCCATAGATAATTGTTGGTATATTATCTTACAGAAATCGTTTATA
AACATTTTTATTATTCAATTTATATATTTATATCTGCAGAACTACATATGTAGTTTTACTTACCACCAAAACTTGTTGC
AAAAAAACATTTTTACATTTGCCCAGTTAAAAATCACCATTAATCTTAGTGGAGAATTATTTTTTAATTATTTAAAATA
AGAATATTTTCATTTTTGCATTTTTCTAGAGAGAGCATGGCATAAGCCTTGTAAAGTTACTCCTGAAATTTAATTTTCT
TTTCTTATTTCCTACTCTCTAGTCCTAAGAGATGAGTGGTTCAAGACAGAGTGGGGGTAAGGCAACAGTCAGCACTTTG
TCTTTGCTCCACTCTCTGGTTCATCTCTGAAGCCTGATTTCTCTACCCAGGCATGAAGATACTTGAATAAGTAGCCTTT
TCCATCCTTTTGCCCTGATATGAAAACTGGTATATCTCTTGAGAGAAGAGCCTCAAAAAATAATCTGAGATAGGAACAA
GTGGAAAGCAGAGATAGTCTCTTCTTTTTAATTCACCCCTCCTTTGGTCACCTCCTGAATATAAAAAGAAGGACCCAGA
ACAACATGGTGTCCACGGCAACCATATCTAGGTATTGCAGAATTTTAGAGAACCCATGAAATCCTTTCAAAGGATAAGC
AGGGGATCTAAATCGTGTCAGATGTATAGCACCCAGCACAGAGCTGAGGGCAGAATATGTGCTTCATGCATCTTTTTTG
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ATTCTGCAAGTTTTGGTGTGGTAAGACTGGAATCGTACAAATGATATGCTTGGATCAGGTAGTCCCTCGTGGTGAGTCA
TGTCTAGGCTCACCCCGATGCAGTCCAGTCATGCTTCCCCTATGACTTAGTTGTTTGTATTGTCCCCAGAGTCAAGAGT
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TTCCAGCTGGCAGTGATATGGGCTTGGTGATTCACTTTTAGGCCTCATTGGAGTAGAGTTAAAGAAACTTCATTGTCAG
AAAGAGTGAGATCTCTACCATGTGTCTTCTAAGAGTGTTCAGAGTGTTTTTTTTTTTTAGCGTGCAGAAGTCCTAACTT
TATTCCTAGTACCCTCCATTCTCTCTTTTTTTTATTGAAACATAAGAATTGTGCATATTTACAGGGTACATGTGATATT
TTTATACATGTATACAATGTGTAATAATCAAATCAGAGTAATTAGGTTATCAGTTACCTCAAACATTTATCCTTTGTTT
GTGCTGGGAACATTCCAAATCTCTTCTTCTAGCTATTTTGCAATATAAAATAAATTACTATTGCCACCTTATGATACTA
TCAAACACTATAACTTATTCCTTCTATCTAACTGTATTTTTTTACACATTAACCAAATTCTCTTCATCTCCTCCCTGCT
TCCCTTCCCAATGTCTGGTAACCATCATTCTACTTTCCACCTTCATGAGATCCACTTTTTTAGCTTCCTTATATGAGTA
AGAACATGCAATATTTGTCTTTTTGTGCCATCGCTTAACGTAATATACTCTAGTTCCATCTATGTTGTTGCAAATAACA
GAATTTCATTGCTTTTTTATGGCTGAATAATACTATATTGTGTATATATTTCACATTTTCTTTTTTTTTTTTTTTTTT
TTTTTTTGAGACAGAGTTTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGCGCGATCTCGACTCACTGCAAGCTCCACC
TCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGCGCGCCACCATGCCCGGCTAAT
TTTTGTATTTTTAGTAGAGACGGGGTTTCACCGTGTCAGCCAGGATGGTCTCGATCTCCTGACCTCGTGATCCGCCTGT
CTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCGCCCGGCCCACATTTTCTTTATCCATTCATCTACTG
ATAGGTATATAGGTTGCTTCCATATCTTGGCTATTGTGGATAGTGCTGTAATAAACATGGGAGTGCAGATATCTTTTTA
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GAGGAACCTCCATAGTGTTTTTCACAGGAGCTGTACTAATTTACATTCTCACTAACAGTGTATTAGCATTTCTCTTTCT
CTACATCCTTGAAAGCATTGTTTATTTTTTGTCTTTTTGATAATTACCATTTAAACTGGGGTGGGATGATATATCATTG
TGTTTTTCATTTGCATTTCCCTGATAATTAAGTGATGTTGAGGTTTTTTTAAATACACTCATTAGCCATTTGTATGCTT
TCCTTTGAGAAATGTCTATTCATATCCTTCTCTGCTTTTCAATGGGATTATGTACTTTTTTACCTTGTATATTCTGGAT
GTTAGTCCCTTGTCAAATGAATAGTTTGYGAATATTTTCTCTCATTTAACAGGTTGTCTCTTCACTCTGTTGATCATTT
ACATTGTTGTGCTGAAGCTTTTTAGCTTGATGTAATTCCATTGTCTAGTTTTGCTTTTGTTGCTTGTGTTTTTGAGGTC
TTACCTAAAAAATCTTTGCCCAGACCAGTGTTCTTCCAATTCATGAGCATGGGATGGATATCTTTTAATCTTTTGTGTC
CTCTTAAATTATTTTCAACAGTGTTTTATAGTTTTCATTCCAGAGGTCATTCACTTGTTTGGTTAAATTTATTCCCAGA
TGTGTTTTTGTGTGTGTGTGTAAGTATTGTAAATGGGATTACTTTCTTGATTTCTTTTTCAGATTGTTCACTRTTGGTA
TATAGAAATGTTACTGCTTTTTGTATGTTTATTTTGTATATTGCAACTTTAATGAATTTGTTTTTCAGTTCTAACAGGT
TTTGGTYGAGTCTTTAGGTTTTCCTAAATATAGGATCATGTCATCTGTGAACAATGATAGTTTGACTTTTTCTTTTCCA

Fig. 9.112

ATTTAGATGCACTTTGTATCGTTCTCTTGCCTAACCGCTGTGATAGGACTTCCAGTGCTATCTTGAATAACAGTGGTAA
AAGTGGGCATCATTGTCTTGTTCAGATCTTGGAAGAAAGAATTTCCATTTTTCCCCATTCAGAATGATGCTAGCTGTGG
ATTTGTCATGTAAGATCTTTATTGTTTCGAGGTATATTTCTTATGTATCCAGTTTGTTGACAGTTATTATCATGAAGGA
ATGTCAAATTTTATCAAATGCTTTTTCAGCATCTATTGAAATGAGCATATGGTTTTTGTCCTTCATTCTGTTGATACAA
TGTRTCACATTGATTGATTTACATATGTTGAATTATCCCTGCAACCCTGGGATAAATCCCACTTGGTCATAATGAATAT
TTTTAATGTTTTGTTGAATTCAGTTTGCTTGTATTTTGATGAGGATTTCTGCATCTGTGTTCATCACTGATACTGACCT
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CTCATTACTGGTTTTCAGGTTTTCTCTTTTTTCATGGGTTCAATCTTCATGGTTTGCATGTGTCCAGAAATTYATCCAT
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ATCAGTTGTAATATATTCTTTTTCATCTCTGACTTTATTTTTAGACTTCTGGTTGGTGTAGCTAAAAGTTTCTTGATT
TTTTTTTCAAAAAACCAACTACATTTTGTTGATCTTTTGTATTTTTGTAGTTCAAATTTTATTTATTTATGCTTTGATC
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GTTTGTTTGAAGTCTTTCTACTTTTGATGTAGGTGTTGATTGCTACAAATTTCCATCCTAGAACTGCTTTTGGTATAT
CCTCTAGGTTTTTGTATGCTGTATTTCCATTTTCATCTGTCCTAAGAAAATTTTTTAAATTTCCTTTTTAATTTATTCA
TTGACCAATTTGTTTTTCAGTAGCATGTTGTTTTCTTTCCATGGATTTGTACAGTTTCCAATGTTCCTTCTCTTATTGC
TTTATAGTTTTATTCAATTGTGGTCAGAAAATATACAGGATATGATTTTGACTTTTTTGACTTTTTAAAACTTGTTTTG
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ATGTTCTGAAAATGTCTGTTAGGTCAATTTGATCTAGAGTAAAGTTTAATTCTGATGTTTCTTTGTTGATTTTCTTGTC
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AATAGTTTAACTTTGATGCAAATAAACAAAAATAAACTCTACATTGTAATACCACCCCCTCCCACATTTTGACTTATTG
CTGTTTCAATTTACATATTTTTATATTGCCTAACTCTTAATCAATTGTTGAGATTATTTAATAGTTCTTCCTTTTAGCT
TTCATACTTAGGATATAAATTGTTTACTTACCCTAATTATAGTATTATAGAATTATGCATTTTTCTGTTTTTTAATAGT
GAATTTCATACTTTAGGTTTTTTTGTTTTGTTTTTTGTTTTTTGTTTTTTACACATTAGCATCCATTTTTTTTTCAGAT
TGAAGAATTCCCTGTAGCATTTTTTGTAGGCGAAGTGTCGTGTTGTAAATTTCCTCAGCTTTTGTTTGTCTGAGAAAGT
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TGGAAATTTCTATTATGTGGAAGTTAGTTTGCTTGATGGTGTCCCCTTATTCTTCTTTACTCTTTTTTTAAATTCTTTT
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ACCTCAGCTTCCCCTGTTGTTTTATCTAGAATATTTAAGACTTTCTTAACATAAATCATCAAAAATATGTATTTTTTCT
AGTTGAGATTTAACTAGATTAATTCAGTGTGTGGTATTTTTGGCTATCATAATAAAGGTATTGCATTTCCAAACTGCAG
AATATTTGCACTGAGTAAAATAGATGCCATTTTTTTACTAAGTAATTAAAACATTGTCAGAGGATATGCTTTTAAAAAT
TATCACAATAGCTGTAAAGTCAATTGTGTTAATATTGGCAATCTGTCCCTTCTATTTAGAATTTTGTGCCTTAGTCTCT

Fig. 9.113

GATAATTGCATCATTTACAAATCCCCTCTTTACATAAACATGGCCTTTCACCTAACCCTCTAAATTAATCAGCCCTCTT
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TTAGTTATCTTAGCTGGAAGGATTTTTAAAGATGTAGAAATAAAATGAGTAACTGTAGAGTCAGTGCCTCAGAGACTCA
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TTGGAAAAAAAGACGGAGGCACAACCTCCCATAGAAAAGAGTTTCTTTCTCCCATTATCAATATATCTGCTTGGATTCT
GCTTGGCTATTTGCTTGGATTAAATGTTTACTTTTTAGATACATTACTGCTAATAGAGAATGAGAAAATAAGACTGGCT
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TCTTATCTCAGTGGAGTAAAGAAAGTATCTAGAGTTCTGTCTCTTTTTCAAAGTAGATTATTACTCTTAGGAAAAATAA
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CTTTGTGTAGACATTGCATCCTGGAGGCCCGTATTATATCAATCAGGCTTAAATTTCCTCATTGCTGGATCATTACATG
GTCCTACTTATCTGGCTGATGGGGCAGGTTAACAGTTGAGGGCTAGGGGAGTTCAAAGTAGTAATTATTTATCCACCAG
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TGTGCATTGAGGAATTGTCCAGAGGGACTAGGGAAGCCCATCAGACTAATGGCAGACCTCTTAGCAGAAACTCCACAAG
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AATCCAGAAGTTCTTTGAAACCAATGAGAACAAAGAGACAACATACCAGAATCTCTGGGACACAGTTAAAGCAGTATTA
AGAGGGAAATTTATAGCACTAAATGCCCACATAAGAAAGCTGGAAATATCTCAAATCGACACCCTAATATCACAATTAA
AAAGAGCTAGAGAGGCAAGAGCAAACTAATCCAAAAGCTAGCCGAAAACAAGAAATAACTAAGATCAGAGAAGAATTGA
AGGAGATAGAGACATGAAAAACTCTCCAAAAAAATCAACAAATCCAGGAGCTGTTTTTTTTTTTTGAAAAAACTAACAA
AATAGATAGACCACTAGCTAGATTAATAAAGAAGAAGAGAGAGAAGAATCAAATAGATGCAATAAAAAATGATAAAAGG
GATATATATCATCACTAATCCCACAGAAATACAAACTACCATCAGAGAATACTATAAACACTTCTATGCAAATACACTA
GAAAATCTAGAAGAAATGGATAAACTCCTGAACACATACACCCTACCAAGACAAAACCAGGAAGAAGTCAAATTCCTGA

Fig. 9.114

ATAGGCCAATAGCAGTCTCTAAAATGGAGGCAGTAATTAATGGCCTACCAACCAAAAAAATCCTAGGACCAGACTGATT
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GGACTCCTCCCTAACTCATTTTATGAAGCCAGCATCATCCTGATACCAAAACTGGTAAGAGACACAACAAAAAAGGAAA
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TAATCCATGACATAAACACAACCAAAGACAAGAACCACATGATTATCTCAATAGATGCAGAAAAGGCTTTAATAAAATT
CAACATCCCTTCATGTTAAAAACTCACAATAAACTAGGTATTGATGGAACATTTCTCAAAATAATGAGAGTTAATTATG
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ACCTGTATGTTCTGAGCATATATCCCGTTTTTTTACAAGAAATAAAAATAAAGAAAAAAAAGAAAATCTCTTGCAACC
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GAACATCTCCCACCAAAGGACTGGGACATCAGAAAGACTGGCACACTCCTAGCAGATCTTCACAGGGAAGGCACTGAGG
GCAGATAGAGGGAAGACACAGATGCTGGGCTGCAGAGGGAGGAAGCTGGGAACCCTGAGCAATGCTAGTGCACACCAGG
ACCGGTTCCTGGTCCCCAAGAACTCCTGGGGATGGGGTGAATTGAACAGGCCAGGAGCGATCCACTCTCGCATGGATCT
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CACAGTCACTGGTGGGGGTCCCCGCCCCCAAGCCATGTCGCCATGTGGCCACCACTGCTGCTGTGAATGCCCACACAGA
GGCCAGAACCCCAGCACCTGCTAGCACACTGCCACATCCAACAAGCATGCACCCTGCTGTGTTGCCACTGTCACTGCTG
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GTGACCAACAGTCCAGAAGTAACTCAGCCCCTCCAGTGCAGCAGGTTCCTAACCTTGAGGAGCCAGAAAACAAAGTTGG
GAACTGATACCAGTCCCCCAGGGTTAGAGCACACAGTCCACGAGTCCTGAGTTGAGTCTTGGTCCCCTAAAATCTTCCA
GAAATTGAGCCAGTCAACTGAACCCACCTTATACCACCATGAAACACCCAAGGTCATGAAATAGAACAAAAGAAAAAAA
TCCAAAGGACAGTAATTTCAAAGATTGGAGGAACAGGCCAGGCGTGGTGGCTCACACCTGTAATCCCAGCACTTTGGGA
GGCCGAGGTGGGTGGATCACGAGGTCAAGATATCAAGACCACCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAA
TACAGAAAACTAGCCGGGCATGGCAGTGGGCGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATGGCGTGA

Fig. 9.115

ACACGGGAGACGGAGCTTGCAGTGAGCCGAGACTGCACCACTGCACTCCAGACTGGGCAACAGAGCGAGACTCCATCTC
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GCTGATATGACAGAAATAAAATTCAAAATATATATAGAAATGAAGATCATCAAGATTCAGAAGAATGTTGAAACCAATC
TGAGGAAGCTAGGAATCACAATAAAATAGTACAGAAGCTGACAAACAAAACACTCAGTATAGAAAAGAGTGTAACCAAC
CTGATAGAGCTGAAAAAACACAGTACAAAAATTTCATAATTTAATTGTAAGTATTAACAGCAGAATAGACCAACCTGAG
GAAAGAATCTTAGAGCTTGAAGACTGGCTTTCTGAAATAAAATAGTCAGACAAGAATAAAGAAAAAATAATAAAAAGGA
ACAAACAAAACCTCCAAGAAATAAGATATTATGTAAAGAGACCAAATCTATGACTCATTGGCATCCCTGAAAGAGATGG
AGAGAATGGAAGAAACTTGGAAAACATATTTCAGAATATCATCCATGAGAACTTCCCCAACCTAGCTAGTGAGGCCAGC
ATTTAAATTCAGAAATGCAGAGAACCCCCATAAGAGACTTCACAAGAAGATCATCCCCAAGACAGACAATCATCAGATT
CTCCAAGGTTGAAATGATAGAAAAAATGTTAAAGGTAGCTATAGAGAAAGGACAGGCCACCTACAAAGGGAAGTCCTTC
TGACACAGCAGACCTCTCAGCGGAAACTCTACCAGCCAGAGAGATTGGGGGACTATATTAAACATTCTTCAAAAAAAGA
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CCATCTCATATGCGGTGACACCCATAGGCTCAAAATAAAGAGATGCAGAAAAATCTACCAAAAAATGCAAAACAGAAAA
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TGACAGTATTAGATCATTGAGGCAGAAAATTCACAAAGATATTCAGGACTTGAACTCAACACTGGACCAAATGGACCTA
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AATAATGAAATTAAAGCAGAAATCAAGAAGTTCCCAGAAACTAATGAGAACAAAGATAAAATATACCAGAATCTCTGGG
ACACAGCTAAGGCAATGTTAACCAGGAAATTTATAGCACTAAATGCTCACATCAAAAAGTTAGAAAGATTTAAAATAAA
CAACCTAACATCACAACTAAATGAACTAGAGAAGCAAGAGTAAACCAACCCCAAAACTATCAGAAGACAGTAAATAACC
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CTGGCAAACACATAGAAAATAAAACTTCAGGCTAGCATTCTTGATGAACATGCATACAATAATCTTCAACAAAATATTA
GCAAAATGAATCCAGGAGCACATCGAAAAACTAATCCACCACAATAAATTGGCTTTACCCATGGAGGCAAGGTTGGTT
CAACATACACAAATCAATAAATGTGATTCATCACATAAACAGGACCAATGCAAAACCCACATGATTATTGTAATAGATG
CACAAAGGCTTTTGATAAAATTCATCACCTCTTCATGTTAAAAACCCTCAACCACCTAGGTACTGAAGGAACGTACCTC
AGAAAAATAAGAGTTATCTATGACAAATCCACAGCCAACATCATACTGAATGGGCAAAAGCTTGAAGCATTCCACTTGA
AAACCAGCACAAGACAAAGACGCCCTTTCTCACCACTCCTATTCAACATAGTATTTTAAGTCCTGGCCAGAGCTATCAG
GCAAGAGAAAGAAATAAACAGCAAGGCAATACCAAACAGCCAAGGCAATACTAAGCAAGGAGAACAAAAAAGAACAAAT
CTGGAGGCATCACACTACCTGATTTCAAACTATTCTACAGGGATACGGTATCCAAAACAGCATGATTCTGGTATAAAAA
CAGAAACATGACCAGTGAAACAGAATAGAGAGCCCTGAAATAAGGCTGCACACCTACAACCATCTGATCTTAGACAAAG
CAAAGGGGAAAGGACTCCCTATTCAATAAATGATGCTGAGAAAACTGGCTAGCGATATGCAGGAGATTGAAACTGGACC
CATTCAGTACACTATACATAAAAATTAACTCAAGATGGGTTAGAGACTTAAACGTAAAACTCAAAGCTATAAAAGCTCT
GGAAGACAACCTAAGCAATACCATTCCAGACATAGGAACTGGCAAAGATTTTATGATGTAGATACCTAAAGCAATTGCA
ACAAAAGCAAAAAAATGATAAATGGGATCTAATTAAATACAGAGCTTCCTCACAGCAAAAGAAACTACCAACAGAGAAA
ATAGACAACCTACAGAATGGGAGAAAATATTTGCAAACTATGCATCTGACAAAGTTCTTATATCCAGCATCTATAAGGA
ACTTAAATTTATAAGAATTAAACAACCCCATTAAAAAGTGGGCAAAGGACGTGAACAGACACTTTGCAAAAAAAGTACG
TGCAGCTAACAAGCATATGAAAAAAAACTCAGTATCACTGATCATTAGAGCAATGCAAGTCAAAACCACGAGATGCCATC
TCACATCAGTCAGAATGGCTATTATTAAAAAGTCAGAAAATAACAGATACTGGTGAGCTTGTGGAGAAAAGGAAATATT
TATACACTGTTGGTGGGAATGTAAATTAGTTAAACTATTGTAGAAAGTAGTGTGGCAATTCCTCAAAGAGCTAAAAACA
GAACTACCTGTCAACCCAGCAGTCCCATTACTGGATGTATACGCAAGGGAATAGAAACTGTTTCATCATAAAGACACAT
GCTCACATATGTTCACTGCAGTACTATTCACAACAGCAAAGACATGGAATCAATCTAAATGCCTATCAATGGTAAACTG
AGTAAATAAATTGTGGCACATATACTCCATGGCATACTATGCAGCCATAAAAAGGAATGAGATCGTGTCCTTTGCGGGA
ACATGGATAGAGCTGGAGGCTGTTATCTTTAGCAAACTAATGCAGGAACAGAAAATGAAATACTGCATTTTCTAACTTA
TAAGTGGGAGCTAAATGATGAGAAGACATGGACACAAAGATGGAAACTAGGCTTAGCAACTGGGTGACAAAATAATCTG
TACAACAAACTCCCATGACACAAGCTTACTTATATAACAAACTTGCACATGTATCTCTGAACCTAAAATAAATGTCTTT
TTAATATCTGGATCCAAATTGTTTTACTGGCCAATGGAAAAAGATTTTTTGCCCAGATGGCTAAATCTTTTGAATAATA
TTTGTGAAAAAGACTTTTAAGATTTTTGAATAATATTTGTGAAAAAGACTTTTAATAATATTAGTGAAAAAGACTTCCT

Fig. 9.116

TACAGAAGGCAAATTAAGTCTTAATTTAATTTGGCAGCTTTTAATGTGGCAATCTTTGATTCTTTATTCTTTTAGATGG
CTGTGTGCACCAATTAAAGAATGCATCCCATTTGCTAAAGAAATTAAAATTTAAAAGAAAAAAATCTTAAACAATTTAA
TACTACATCTCAAGGAAGTAGAACAATAACAACAGACTAAGGCCAAATTAGGCAGAAAGAGGGAATTAACAAAGATTTG
AGCAGAAATACATGAAACGGAAAATTCAAAAATAATAGAAAAAAATAAGACAACTAGGAATTGGTTTTACTGGTTTTTT
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AAATGAAAGAAGAGAAATCACAAATGATGCCACAAAATAAGAAAGAATCAAAAGAGATAACTATGAACAATTATGTGCC
AACAAACTGGATAAGCTAGAAGAAATGAATAAATTCCTAGAAACATACAATCAACCGAGACTGGATTCTGAGGAAGCAG
AAAGTCCGAACAGACCTATAACTAGTATAGATATTGAAATAGTTATTACAAAGCTCCCAGGAAGGAAAAGCCCAGTACC
AGGTGGCTTCACTGGTGAAATTCTAACAAACGTTTAAAGAAAAATTTATACCATTTCTTCTAAAACTTTTCAAAAAAAT
TGAAGGGGAGAGGGAACATGTCCAAATTCATTACTCTGATACTAAAGTCAGACAAAAGCACCACAAGAAAACAAAACTA
TAGGCCAATATCCCTGAAGAATGAACATACAAATTCCTCAACTAAACCCCAGCAAACTGAATCCAAGAGCACATTAAGG
GGATTATACACCATGACCAAATGGGATTTGTACTTGGGATGTTAGAATGGTTCAGTGTGTAAAAATTAACGTGAAATTC
CACATTAACAAAATAAAGCATAAAAACATGTGATCATCTCAAGATACAGAAAAAGGGTTTGACAAAATTTAACATCTTT
TAATTAAAAACTCAAACTAGTAATAGATTATGTCAAATACAAATACAAATATTATATACCTCAACATAATAAAAGCCAT
ATATTAAATGCCCATCACTAACGTCATACTCAATGGTGAAAAACCGAATGAAGGCTTTTCCTCTAAGATTAGAAACAAG
ACAAGGATGCCCACTTTCACTGCTTCTATTCAGCAGGATACTTGAAGCCCTATCTAGAGCAATTGGGTAAGAAAAAAAG
TAAAAAGGCATTTAAATTGGGAAGGAAGAAATAAAATTTTCCCTGTTTGCAGGTAACATGATCCTATATATAGAGAAAA
CTCTGAAGATTCAATTAAGAAACTGTTAGAACTAACAAATGAATTTAGTGAAATTACAGAGTACAAAATCAACATACCA
GAATCAGTTGCATTTCTATACACTAACAACAAACTATCTGAAAGGAAATTAAGAAAACAATGCCCATCTAAACTAGTGC
CAAAAAGAATAAAATAATTTAGTAATACACCTAAACCTAACTAACAAGGTGAAAGATTTGTGTATTAAAAACTACAAAA
CATTGATGAAAGATACTAAGCAAATCAAAAGACATTGAATGTTCATGAACTAGAAGACTTAACATTGTTAAAATATCCA
TACTACCAAAAGAAATCTACAGATTCAATGCAATCCCTATCCAAATCTCAATGTCATTTTTTACAGAAAGTGAAAAAAA
GCTCTAAAATTTATATGGAGCCATGAGTCAAGAAATAACCAAATCAATCTTGAAAAAAAGAATAAAGCTAGAGACATCA
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CCAATGGAACATAAGAGAATCCAGAAATAAATCTATGCATACTTGGTTGTTTTATTCTATTCGGGCTACTATAATAAAA
TACCATAAACTGGGTAGCTTATAACAACAGAAATATATTTCTCACAGTTCCAGAAGTTTGGAATTCCAAAATTGAGGCA
CAGGTACTGATGGACTGCTTCCTCATAGTTAGTGCCTTCTCACTGTGTCTCACATGGTGGAAAGGTGAAGCATTCCTCT
CAGATGTCTTTTATTCATGAAGTCTCCACTTTTATGACCTAATCATCTCTGTAAGTCCCCGTCTCCTAATGCCATTCAA
CATATAGATTTAGGGAGACAAAGATTCAACATATGGATTTTGGGTGACACCAACATTCAGTCTATAGCAACAGTCAACT
GACGTTTGATAAAGGTGTCAAGAATACACATAGAGATTGGAGAGTCTCTTCAACAAATGGTACTTGGAAAACTGGATAT
CCATATTAAGGAATGAAACTGGATGCTTGTCTTACATCATATGCAAAAATCAACTTGAAGTGGCTTAAAGATTAAACAT
AGACCAAGACTATAAAACTACTAGAAGAAAACCTTCATGACATTGGTCTTGGCAATGGTTTCATGGATATGACATCAAA
AGCACAGGCAACAAAAACAAAAGTAAACAAATAAGAATACATCAAACTAAAAAGCTTGTGGGTGAATTGTTTGAGCTCA
GGAGTTCGAGGCCAGCCTGGGCAACATAGTGAAACCTTGTCTCTACAAAAAATTAAAGAAAAAATTAGCTGGATATGGT
AGGCTCACACCTGTAGTACCAGCCACTTGGGAGGCTGAGGTAGGAGGATTGCTTGCACCTGGGAGGTGCCAGAGGTTGC
AGTGAGCTGAAATTGGGCCACTGTACTCCAGCCTGAGTGACAGATCCAGACCCTATTGCAAATAATAGTAATAATAATA
ATTAATAAAATAATGATATGAATCAACAGAGTGAAAAGGACACTTACAGAATGGGGGGAATATTTGCAAACCGTATATC
TGATAAAGGGTTAGTATCCAAAATATCTAAAATAAACCCCTTCAGGTTATTAGTTAAAATAAAAGAGAGAGAAAAATAA
ATAAATAAATAAATAACCTGATTTAAACATGGGCTATGGACTTGGATAGACATTTCTTCAAAGAAGACATACAAATGGC
CAACAGATATTTTAAGAAATACTCAGTGTCACTAATCATCCAGGAAATGTGAATTAAAACTATAATGAAATATCACTTA
ACACCTACTATAGTAGAATGGCTACTGTTAAAAAAAAACAGAAAATAGCAAGTGTTGACGAGGATGTACAGAAATTGGAA
CCCTTGCACACTGTTGGTGGAAATGCAATATGGTGCAGCTTTTGTGGGAAACAAATGAAGTTCCTCTAAACATTTAAAA
ATGCAATTACATGATCCAGCAATCCCACTTTGGGGTGTTTATTCAAAAGAATTGAAATCAGGATCTCAAAGATGTATTA
GCACTCCTATATTCATTGTAGGATTATTCACAATAGTTAAGATTTAGAAACAACTTAAGTGTCTATTGACAGATGAATA
GATGAGAAAATATGGTATATAAATAGTGGACTATTATTCAGCCTTAAAAAAGCAGGAACTATTGCCGTATGTGACAACA
ACATGGATGAAACTTAAAGACATTGTGCTAAGTGAAATACATGAGTCATAGAAAGACACATATTGCATGATTCCACTTA
TATGAGTTATCTAAAATAGTCAAATTCATAGAATCAAAGAGTTGGATTGTGGTTACCAGTGGGTGGAGGTAGAGAGAAG
GTAGAGAGAAATGGGGAGTTACTAAACAATGGGCGTAAAGTTTCAGTCAAGAAAGATGAATAAGTTCTAGGGATCTGTT
ATACAACATTGTACCTATAGTCAACAATAATGTATTGTACACATATGCATTTGTTAAGAAAGTAGTTTTGTGTTTAATG
TTTTTAGCACAATTTTTTAAAATAAAAAGACAGTGGTATTCTAATTTTCCTTTCTTTTCTTAAACTCAATTAGAATTTC
TAAATTTGGGGCATGTTCTTACATTTATAGGTAACAGTTCATTTATTATTTTGAGACATAGAGCAATTTATAAGGAAAT
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TCTAGTTTATATTTGCAAAGGTGTGTCTGGGCCAGTCCAATCTTTCTTCCTACTGTTCTCATCTACCATATCAATTTAC
ATTACAGATCACATGCCGAACTTTAGGGGAGAGGACAAATTACTGGGATTAACAATGAAAGATATAGAACTGCTCAGGA
TATTTTCTAGGTTTAGGAGACTTGAGGAAAATGAATAAGTGAAATGTAGACATATATGAATGAATATATCAAACATCAG
AGGAGAAAATTTAGCTGTGTCCAGAGAGGACAGAGATGCTATCTTTCTATTGCTTGTTTTTGAACTTTCTTTCGTATTT
TATTATTGTATTGTTAATAATCATTGAAGTAGTGTGAGAAATTTCAGAGAAGTAGAAGTAGAGCAGTTTCTCTGAAAAA
CTTATAGATGGTGACAGATGACCACATAATTGTGTGACAGTAAAATGCTGTATTGAGCTTCCTGCTGTATTATAGAAAG
AACATATGAATAGATAAAAGCACAACAGTTTTCCTTTTCACTATGTCTCAGGAGAAAACAATGCACATCGGCATATATG
GAAACAAATGAGATTAGTTAAAAGAAGGAATTTAAATTATGTAGACTAAGCCAGGGTAATGCTTACGAATGAGATGACT
CATCTAATAAAAGCATCAAAGAGAAAAACTGTTGTTTCAGTTCAGATTTTCTTGGTCGTTTTCCTGAGATGATGATGAT

Fig. 9.117

GATGATGATGATGATGATGATGATGATGATAATTTGCTTTAGGAAGGAGCTGCACACTACAAAATGCAACAGAGTTGAT
AATGATAAGATTAGTTGAATTAAGTAATTCTAGACCCCAAATTGATTATTTCATTTCACTTTCTAGGTCAATAGTGTAC
CTTGTTGCAATGAACTGAGTTGGTTGTAAAAAGTCTACTATCTTATCAAAAGATTGTTCAAAAACATCTCCATGTACTA
AATACTATCAAGCAAAAATATATTGTGTATAGGGAAATACAGTATTTAAAAAAATTGGTAGAATCTACAATGAACTCAA
ACAAATTTACAAGAAAAAAACAAACAACCCCATCAAAAAGTGGGCGAAGGATATGAACAGACACTTCTCAAAAGAAGAC
ATTTATGCAGCCAAAAAACACATGAAAAAATGCTCATCATCACTGGCCGTCAGAGAAATGCAAATCAAAACCACAATGA
GATACCATCTCACACCAGTTAGAATGGCGATCATTAAAAAGTCAGGAAACAACAGGTGCTGGAGAGGATGTGGAGAAAT
AGGAACACTTTTACACTGTTGGTGGGACTATAAACTAGTTCAACCATTGTGGAAGTCAGTGTGGTGATTCCTCAGGGAT
CTAGAACTAGAAATACCATTTGACCCTGCCATCCCATTACTGGGTATATACCCAAAGGATTATAAATCATGCTGCTATA
AAGACACACGCACACGTATGTTTATAGCTGCACTATTCACAATAGCAAAGACTTGGAACCAATGTAAATGTCCAACAAC
GATAGACTGGATTAAGAAAATGTGGCACATATACACCATGGAATACTACGCAGCCATAAAACATGATGAGTTCATGTCC
TTTGTAGGGACATGGATGAAACGAAACCATCATTCTGAGCAAGCTATCGCAAGGACAAAAAACCAAACACGCATATTCT
CACTCATAGGTGGGAATTGAACAATGAGAACACATGGACACAGGAAGGGGAACATCACACTCTGGGTACTGTTGTGGGG
TCGGGGGAGCGGGGAGGGATAGCATTAGGAGATATACCTAATGCTAAATGATGAGTTAATGGGTACAGCATACCAGCAT
GGCACATGTATACATATGTAACTAACCTGCACATTGTACACATGTACCCTAAAACTTAGAGTATAATAATAATAATGAT
AATAAATTGGTAACTAGTTTAAGGTCATGTAACCTACTCACACAAATAATCACAATAAGATGTAATATAGAATGTGCAT
GTAAAACATAAATTTTATACATAAAATAAATAATAGATCATAGCCCTGATGCATGCGTGCACAAACACACACACACACA
CACACACACGACACACACACTTGCACTATATTTGCAATAGCCTAGCTACTAAGGAATCTGATTAAACATAGATTCTATC
TTGCATATCCGATTTCTTAATAGCAGAATTAAGAGCTTCTTGGAAGAAAAGGCTTATACTCAAAATCTGCTTTTCTGAA
TCCTTTTGAGTTGAGCACAAAAGGAAACCAAAAAGACCCAAGAATAGCAATGCAATGTGTGTATTGAAGGTTTGTTAGG
AATTATTCACTATTGTATTTCTTTTCTGTCCTACATTACAGCATAGGCTTTGCCTAGAGGCAAAAGAATTAAGAATTAC
TTGCAGTTCCTACTCTTTTGCAGTCAAGGCAGTAATAGGGTGATGGATAAGGTGTATAGAACAGCAGTTCTCACCAAAT
GCCCTTGAAAAATCAAGCAAATAGATGGCTTCACATTTCATTATCTAACCCCGATATGGCCTGACATTTATACTGGGAG
CAGAGATGCCAATATAACTGAAGGGTTTTGAAATGGCCCTTTGAGGAAAGGTGATGAGGTATCCATTGATTTAATCTAA
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AATGGCATATTTCTAGCTGTTCATGTGGCTTTATGCTGATAGTGTCAGTCAAATGAACAAGCTTGAAGTTTTTAATCAG
AAAATATTACATTTTATAAGTGGAAGGGTGCAAAATAAGAAGATTGCAAAGTAGCGCTGCCTGCACCTATCATTAATGC
TGTGTGGATTTTTTTCTAATTGAAAACAGCACAACGAGAGCTCTGAGTATGAGATGTAGTTATACAAAAAGGCATAAGA
TGCTAGACACCTTCAAATACTGGGTGTTCTCCTTACTAGCCATATGACCTTAAGCAATGTATTTAACCTATTCTTTGTT
CTCATTTTCCTCATTCATAAAATATGCACAATAAAACTTACCTTATAGTTTTGTTTCAAATATAAAATGAATAAATATT
GTTAAATTATTTCGAGCATTCTTTGGTACACAGTAAACCCTCCGTAAGTATTAACTTTTATGGATAAAAACTTTTAAAA
AATGGAAATAGATTTATTATTTTTATCTGATTATGAAAATTATATGTGATTATTATTTAAAAGATTTTAAAGAAAGATG
CAAAGAGAAAAAAATTACTTAAAATCAATTTGTCCTCAGATAACTATAGTGAACATTTAGGTATCATAGTTCCAGGAAGA
CTTTTGTGTTCAAAAGATGCATAATGTATACAATTGTGTCATGGGCACATCTCCTCGGGCCAATCTATGGCTGACCCCT
ACTCCATCCTACCCCTAAAGTAAACATGCATTTTGACCTGTATCACTGTCATCTGTCAAAATCCATGCTCCTCAAAGGC
AGTATCTTCTGTAAACCCTCAATCTTTTTATTACTATCTAGATTCTCAGGCTTAATTGTTCCAAATTATGCCAGCCATC
ACCTCCATGCAAATCTCACTTACCTACCTCTTTATCCATCAAAAATAATCTATTAAAATCAGTTATACTTACTTATTTA
GCACTTAAATATTTTAGACTTTGTGCTAAGTGCCTCACATATAGCATTTTTACTCTTCCAGATAGCTTTCAAGGGAGCT
TTCATAACAACCATTTTAGCATTGTTTCGATCTCATTCTCAATCTCCATCTCTTTCAAACTATAAACTAAATTTCTCCC
TTGGCAAGGTTGGCCTACACCCAGGAACAAGCAAGGAAAGCCACCCTCTGAGGCTAGAAGCAAGATGGAGTCAGCCATG
CTAGCCTTCTCTCATTGTTATAATCTTTGCAAAGCTGGTTTCATATTTTACTAATCTTTCTCTGTTAAATGGACAAACA
TCCTTCTTGATGCTACTTCACACACCTTTTCCAACCTCTCTGTACTTGACACAATTAGACAAAGCATTTGCTCAATAAA
TATTTATAAAGTTAAGAAAGAATCACTTTATACCTAAGAGTGGATCCTAATGTTTACATAAATATATTCCTGTATTGAG
GTTCTTCCTTTCTCCCCAATTACCAAATTCTTTCTTTCTTTTTCTTTCTCTTTTTCTTTCTTTCTTTCCTTCTTTCTTT
CTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTCTTTCTTTCTTTCTTTCTTTCTTCTTTAAGTTTTGG
GATACATATACAGAACATGCAGGTTTCTTACACAGTATATGTGTGTCACGATGATTTGCTGCACCTATCAACCCATCAC
CTGGGTTTTAAGCCCTGCATGCATTAGCTATTTGTCTTGATGCTCTCCCTCCCCTCGTGCCCCCATGACCCAACAGGCC
CTGGTGTGTGTTGTTCCCCTCCCTGTGTCCATGTGTTCCCATTGTTCAACTCCCACTTATGAGTAAGATGGATTTCTGT
TTGCTTTTCTGATCCTGTGTTAGTTTGCTGTGAATGATGGCTTCCAGCTTCATCCATGTCCCTGCAAAGGACATGAACT
CATTCCTATTTGTGGCTGTATAGTATTCTATGGTGTATATGTACCACATTTTCTTTATCCAGTCTATCATTGATGGGCA
TTTGGGTTGGTTCTATGTCTTTGCTATTGTAAATAATGCTGCAATAAACATACATATGCACGTGTCTTTATAATAGAAT
TATTTATATTCCTCTAGGTATTTACCCAGTAATGGGATTGCTGGGTCAAATGGTATTTCTGGTTCTAGATCCTTGAGGA
GTTGCCACACTGTCTTCCACAATGGTTGAACTAATTTACATTCCCACCAACAATGAAAAAGTGTTCCTCTTTCTCCACA
GCCTCTCTAGCATCTGTTGTTTCATGACTTCTTTTTAATAAGCGCCATTCTGACTGGTGTGAGATGGTATCTCATTGTG
GTTTTGATTTGCATTTCTTTAATGATCAGTGATGTTGTGCTTTTTTTTCATATGTTTGTTGCCCACATGAATGTCTTCT
TTTGAGAAGTGTCTGTTCATGTTTTTGCCCACTTTTTAATGGGTTTTCTTGTGTTTTTCTTGTAAATATGGTTAAGTTC
CTTGTAAATTATGGATGGTAGCCCTTTGTCAGATGGGTAGATTGCAAAAATGTTCTCCCATTCTGTAGATTGCCTGTTC
ACTCTGATGACAGTTTCTTTTGCTGTGCAGAAGCTCTTTAATTAGATCCCATTTGTCAATTTTAGCTTTTGTTGTGATT
GCTTTTGGTGATTCCATCATAAAATCTTTGCCCATGCCTATGTCGTGAATGGGATTGCCTAGGTTTTCTTCCAGGGTTT
TTATGGTTTTGGGTTTTACATTTAAGTCTTTAATCCATCTTGAGTTGATTTTTGTATAAGGTGTAAGGAAGGGGTCCAC
TTTCAGTCTTCTGCATATAGCTAGCCAGTTTTCCCAGCATCATTTATTAAACAGGGAATCCTTTCCCCATTGCTTGTTT

Fig. 9.118

TTGTCAAGTTTGTTGAAGATCAGATGGTCTTATATCTGAGGTCTCTATTCTGTTCCACTGGTATATGTGTCTGTTTTGA
TACCTGTACCATGTTTTGGTTACTGTAGCCTTGCAGTATAGTTTGAAGTCAGGTAGTGTGATGCCTCCAGCTTTATTCT
TTTTGCTTAGAATTGTTTTGGCTATACGGGCTCTTTTATGGCTCCATATGAATTTTAGAGTAGTTTTTTTCTAATTCTG
TGAAGAAAGTCAATGGTAGTTTGATGAGAATAGCACTTAATCTATAAACTACTTTGGGCTGTATGGCCATTTTCATGAT
ATTGATTCTTCCTATCCATGAGCATGGGATGTTTTTCCATTTGTTTGTGTCCTCTCTTATTTCCTTGAGCAGTGGTTTG
TAGTTCTCCTTGAAGAGGTCCTTCATGTCCCTTGTTAGCTGTATTCCTAGGTGTTTTATTCTCTTTGTAACAATTGTGA
ATGGGAGTTCATTCATGATTTGGCTCTCTGCTTGTCTATTGTTGGTGTAAAGAAATGCTTGTGATTTTCACACACTGAT
TTTGTATCCTGAGACTTTGCTGAAGTTGCTTATCAGCTTAAGGAGATTTGGGGCTGAGACAATGGGGTTTTCTAAATAT
AGGATCAAGTTGTCTGCAAACAGAGACAATTTGACTTTCTCTTTTCCTATTTGAATACGCTTTATTTCTTTCTCTTGCC
TGATTGCCCTGGCCAGAACATCCAATACTATGTTGAATAGGAGTGGTGAGAGAGGGCATCCTTGTCTTGGCCAGTTTT
CAAAGGGAATGCTTCTCGCTTTTGGCCATTCAGTATGATATTGGCTGTGGGTTTGTCAGAAGTAGCTCTTATTACTTTG
GGAAATGTTCCATCAATATCTAGTTTATTGAGAGTTTTATCATGAAAGGATGTTGAATTTTGTCGAAGGCCTTTTCTGC
ATCTATCGAGATACCAATTACCAAATTCTAAGATTACATGGTGTTCTGCAGTGAATAGATCTATGCAAACCTACCCCCA
AAGTTCAAGGAAGCTGAGAGGCTGAAGAGGCTGACATATCCAGCTTCTCAGGAAAAATGAAAAAACAAAAAACATTTAA
TAGCCAGGTCCCAGGTGGCTGCAAGAGGAGATGGTGGTTCACTGCAGTGTTAGCCCCAGACCTAGGAATTATTTGCTGT
AGTGAAGGAACATGTAGGACAGTTGAAATCAACTCCTCAGGGAAAGGCAAGCATGCTATGTAAATCTGCCTAAGGGAAG
GATTTATGGTTGAGGCTGTTTTGAACAAAGGGTAGAATTTATGGTAACAGTAGGTAAAGTATAAATCTTAGAGGCATTC
CTGGAACTGGGGTAAATCAGATGTCAGTATGGTGGACTGACAATGAAGATGGAGTTGCTTTAGTCTCCACACATGGGAA
CAGATAGAAAAAGGTGTCTTTATAACCAAAATGTTGGCTTTTACAAAGCTCTGCTGTAATTCTAAATAGATGGAAGAGG
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TAAATCTCTCATAGAATAATTATTAGAGTATTTATGAATTTTCTTCTCTTCTCCAAATTATCTTCACTTGGGGTTATTT
TATCTTTATTTGTGTATCTTGGACTGTCTTTTTTCAAAGCAAGCTTTCTTTAGATGCCTGATGAGCTATGATTATAATT
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AGTTTTCCTGGGGGGGATCAGAACATGCCAGATGATGGAAGTCTTTTGTCTGGAGCTATTATTTTGATTTAGAAAGGTT
TTATTTTAGTGAAGTTATAAAGAATCCTCAAATATTTCTCTAAGCTGGAGAGGCCTGTCTCCTGGGTGTCCTCTTTCCT
GCAGGGTTGGATAGTGGCTATTTCTACCCATAGATACTTGTAATTGTCAGTTCCCCATGTCACTCCTGTACCCTTTCCT
GTCTTCATTGCATGTGGTGTTTTGGAATTCTTAGCCTTTCTGGAAAGGCAATTTCTCTCTCTCAGTCTGTCATATTTAT
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TCTGTTGACATATTTTGTATTCTCATGACTCTCTTTCAGTTCCTTACTACCATTAGGGTTTTGTACTTTTCTCCCCTTT
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TGACAATGCCAAAAAAGATAGATAGAACTTCTAATTTCATTGATGTTTCTAGTTTCCTGAAGAAGCTAGAAAGAATGGT
ATGGATATCATTTTTCTGAATATATACATAAAGGTTGAAATTAATATAACTATTCAGAATTTTAAAACAATGAATAACT
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TGAGTGACAATACTGCCTTTTAATTTTTTCTCAAAATGTTATAGGGCAACAAGAGATTGGCAGTATGAGCTGTCTTTTT
ATTGTATTTTAATGGTAAACTTGTACATGATTATGGGGATATTCTAACTTTTATGATTTTTTAAACAACTCTCAGTTCC
ATCCCATAAAAGAGCTTTATGTAGAAATACTTTTAGCAGCTTTTAAGTTTATTTCATCTTCTCTTCCCCAGGAGACAAG
GTAAAAGTAGAGATTACATTTTCTGGAGATATTACTTTCATTTATATCTTTATAAATATGGATAGACAATTTTATAATA
ACAGTGCTAACACTGAAAAGGAAAAGAGTAAGATTTTGTAATTTATAAATAATCCTTATGGGGATGTTATTATTTAACT
CTGAAGATGTTGTTTCACTTTTCATTATTTTGGTTTCAGTCACTGCTTGCAGAATAGTAATCTCTTAGCATATGAAGTC
AGCAGATCAAATGCAAGAAACAAAACAAAACAAAAAACTCAGAACAAAATCAAGAAGGCTCAAAGTTTAGCACACTATT
TATTTCACTGTTTTTAATCATACTCAGGAAGGGTTTTAGTGAAGAAACAGGAGTGAGATTAATCAAAATAGCTCAAAAT
GCTCAAAACTTAAGTTATATATTCAGGAGGCTTTAAATTCCCACCATTTTAAAAAGTGTTCTTTAAACCTCAATTTCGG
GTACCTTGCTGTTCCTTGGGTTTGACTGAGGATCAGTATTTTCTTGCCATTTATCACACTTAAACATAGAGCATCCAGA
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TTGTAATGCTATGTTGTTAATCTAGAGACAGGAATATATAACTTCTATTTTCTTCAAATGAAAAATGGCTTTGGTCATA
AGTACCTATACCCAAATCTTATTTCAATATACTCTACATTAACAGCATGTTACAGATAGGAATCCAGTATTATATTTAC
ATAAATTAGTTATTTATCTCGATATTTACAGAGTGCTAGGCATTGTGCAAGTCAAATAATACATATTCACTGTCCTCAA
AAACTCAACACTAGCTAATGGGAGACCAGCATCAAAATAAAAAAATAAGAGCAATACAGTTTTCTATGTGCAAGACAGA
CACAGTTCTACAGGGCTGGGGACAGAAGGCACTGAAGAGGAATGGAGAAACTGAATGAGGAAAAACTTTGGAGAGGAGG
TGTGGCTGGAGCTGAGTATTGAAATAGGAGAAATATTTGTTCAGATATTACTCTTTTTATTTTTTCATGACTGAATTCC
AGGCATACGTACCTTCAAATACCTTATTGCAGATGACCTAGAAGGCTGCATGTAAAGATAAATACATCCTAACATTTGT
ATATTGTTGCTTCTCAAATTTCACAACTGTGATTACTTGCTGTGTTGGTTACTGATCTTTATTTTCATTTACTTAGCAT
CTTCATTGATAATCCTGATTGATGTAGTTTTACTTTCATCATCTAAATATCTCTAGTTTCTAATTTATTCTGTGTAGAG
ACTTTAGTTTCATCAAATATAAGTGGGCATGAAATTATATACCTGAGCCAATAGAAGAACTCAAGACTTTTATTTGCCT
TAATGTAGGATTTAAAAACCAATTCAAAAACAATTGTTTATATATGTGGGAAAATTCCTTTAAGTTTCTGTTGATAGGT

Fig. 9.119

ATTGGAATAGGTTTCCTAGTAAGATATTAAATGTGTCATCCAAATAAATTTTTAGGTTACATAAACACTGATCTTGAAT
AAAATAGCTATAGTTCTACCTGGAGGTAGAGAGTCATAATAATATCAAATTAGAGCTCATGTTTGTGTGTGTATGTGTT
TGCATACTTGTGCACGTGCTGGCTTTTATGTACAAAATGGTGATCATCAAAGGTAGTTGTCATCAAAAAGTCATAGATT
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AGAGCAGAGCCCAGAACTTGGGCCTCTTGACTTCCCTTTGCAAATATATCATTGTGCTTTGAAATTATAGATATACGGA
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GCAGAGTCTCAGTGAAAACTTGTTTGGGGGTTGGTGCCTCTGATTCTCAGTGCAGCCTGCCAGCCTCATTGGGAAAAGG
TGTTTAATATAGGCAGCGATTTTCTGTATTATGAACTGAAATAGAAAATGCTGCGATGGGTTCATTCAAGGGAGACCCA
ATATCTTACTTACAATGAAGAAATCAGGCAATTTTGGGGAGTAGAAGTGGAAGTGTGACTCATACATATATTGGTATTT
TCTTTTATGAGATTTTGATATGGCACTTAATGTTTTATGCTGAGAGGAGATGAAGATTTCTCATTTTCCTACAATTTCA
CTGAGAAAATCATACAGCAAGGACACAGAACTTCATGCAACTGCCTTCTTTTATTAGTACCTATATCTTGTCTTTCTTT
CCTTTCTTCCCTTCCTTGCTTCTCCTTTCCCTTTTGGTTTCTTTGTTAAGCCTTTTCTTCCTTCCCTTTATCCCTCCTT
ATAATTGATTTTGCTTCTTTGTGTTACTACTTTCTTTCCATGGTTCCTCCAACCTGTAGTATGAAAGAGAGTGGATATG
GTAGTGGTTAAGAGCATAGGCTCTAAAGTCAGACTGCCTGGCTTTGAATCCTCTCTACCACTTACTGACTGAGTGACCT
TGGATTGAGTCACTGAACTTCACTTTTCAATTTTTTATGTCTTATTGGATAAGTTTCAATCAGAGTTGAGGATGAAGTG
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CATTTATGGTTATTCCAATATATACATTTTGTGTAGAAGGCTTAGTCTTTCAATTACAATAAGCTATTGGTATAGTTTA
GCCATCTAATGCTAATGGAAAGGAGAATGGGCTCAATTGTTCTAAACAAATTTTATAACTTACTTATCTTGGGCTTTGA
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ACAGTTTTGGTCTGGTTTTGTTTATTAGTTTGTTTTCTGCAGGTAGAAATACCTAGGAAAGACAACATCATTTGATAAA
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CCCACCGACAGGCCCTGGTGTGTGATGTTCCCCTCCCTGTGTCCATGTGTTCTCATTGTTCAAATCCCACTTATGAGTG
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CATTGTGGTTTTGATTTGCATTTGTCTAATGACCAGTGGTAATGAGCTTTGTTTATATGTTTGTTGGCCGCATAAAAGT
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GATGTGCTGCTGGATTCTGTTTGCCAGTATTTTATTGAAGATTTTTGCATAGATATTCATCAGGGATATCGGCCTGAAA
TTTTTTCGTTGTGTCTCTGCCAGGCTTTGGCTTCAGGATGATACTGGCTTCATAAAATGAGTTAGGGAGGACTCCCTCT

Fig. 9.120

TTTTCTATTGATTGGAGTAGTTTCAGAAGGAATGGTACCAGCTCCTCTTTGTACCTCTGGTAGAATTCAGTTGTGAATC
TGTCTGGTCCTGGGCCTTTTATGATTGGTAAGCTATTAATTACTGCCTCAATTCAGAACTTTGTATTGGTCTATTTAGG
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GCTGTGTCCTAGAGATTCTGGTACATTGTATCTTTGTTCTCACTGGTTTCAAAGAACTTATTTATTTCTACCTTAATTT
CATTATTTACCCAGTAGTCATTCAGGAGCAGGTTATTCAGTTTCCATGTAGTTGTGTGGTTTTGAGTGAGTTTCTTAAT
CCTGAGTTCTAATTTGCTCTGTGGTCTGAGAGACTGTTTGTTATGATTTCTGTTCTTTTGCATTTGCTGAGGAGTGTTT
TACTTCCAATTATGTGGTCAATTTTAGAATCAGTGTGACAAGGTGCTAAGAAGAATGTATATTCTGTTGATTTTGGGTG
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CTCAGTGATGTGTCTAATATTGACAGTGGGGTGTTAAAGTCTCCCAATATTATTGTGTGGGAGTCTAAAAGTCTCTTTG
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TGTTGCGTTGATCCCTTTACCATTATGTAATGCCCTTCTTTGTCTTTTTTTGATCTTTGTTGGTTTAAAGTCTGTTTTA
TCAGAAGTTAGGATGGCAACCTCTGCTTTTTTATTTGCTTTCCATTTGCTTGGTAAATATTCCTCCACCCCTTTGTTTT
GAGCCTATGTGTGTTGTTGCACGTGAGATTGGTCTCCTGAATACAGCACAACAATGGATCTTGCCTCTTTATCCAATTT
GCCAGTCTGTGTCTTTTAATTGGGGCATTTATCCCATTTACATTTAAAGTTAATATTGTTATGTGTGAATTTGATCCTG
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CCTGAATACTGCGCTTTTCTGACGGCCTTAAAAAACGGCACCAGGAGATTATATCCTGCACCTGGCTTGGAGGGTCCTA
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GCTCTGCACCAAGCAGACCTAATAGACATCTACAGAACTCTCCACCCCAAATCAACAGAATATACATTTTTTTCAGCAC
CACACCACACCTATTCCAAAATTGACCACATACTTGGAAGTAAAGCTCTCCTCAGCAAATGTAAAACAGAAATTATAAC
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AAACTGAACAACCTGCTCCTGAATGACTACTGGGTACATAACGAAATGAAGGCAGAAATAAAGATGTTCTTTGAAACCA
ATGAGAACAAAGACACAGCATACCAGAATCTCTGGGACGCATTCAAAGCAGTGTGTAGAGGGAAATTTATAGCACTAAA
TGCCCACAAGAGAAAGCAGGAAAGATCTAAAATGGACACCCTAACATCACAATTAAAAGAACTAGAAAAGCAAGAGCAA
ACACATTCAAAAGCTAGCAGAAGGCAAGAAATAACTAAAATCAGAGCAGAACTGAAGGAAATAGTGACACAAAAAACCC

Fig. 9.121

TTCAAAAAATTAATGAATCCAGGAGCTGGTTTTTTGAAAGGATCAACAAAATTGATAAACCGCTAGCAAGACTAATAAA
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CCTGTTTGCAGACGACATGATTGTATATCTAGAAAACCCCAATGTCTCAGCCCAAAATCTCCTTAAGCTGATAAGCAAC
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TGGGATACATGTGAAATTTTGATACATACAATATATAATAATCTTATTGGGGCAATTGGGGTGTCCATCACCTCAGGCA
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TTCTAGTTAGCAATTCCTCTCACCTTTTTTTCAGTGTTCTTAGCTTCTCTGCATTGGGTTAGAACATGCTTCTTTAGCTC
GGAGCCATTTGTTGTTACCCACATTTTGAAGTCTACTTCTGTCAATTTGTCAAATTCATTCTCCATCCAGTTTTGTTCC
CTTGCTGGTGAGGAGTTGTGATCCTTTGGAGAAGAGGCATTCTGATTTTTGTAATTTTAAGACTTTTTGCACTGGTTCC
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TTTGTTGACGTTGATGCTACTCCTTTCTGTTTGTTAGTTTTCCTTCTAACAGTCAGGCCTCTCTGCTGCAGGTCTGCTG
GAGTTTGCTGGATGTCCACTCCAGACCCTCTTTGCCTGGGTATCACCAGCAGAGGCTGTAGAACAGCAAAGATTGCTGC
CTGTTCTTTCCTCTGGAAGGTTTTTCCCAGAGGGGCACCCACCAGATGCCAGCTGGATCTCTCCTGTATGAGGTGTCTG

Fig. 9.122

TCGACCCCTGCTGGGAAGTATCTCCCAGTCAGGAGGCACGGGGGTGAGGGACCCATTTGAGGAAGCATTGTGTCCCTTA
GCAGAGCTCAAGCACTGCGCTGGGAGATCCACTGCTCTCTTCAGAGCCAGCAGGCAGGAATGTTTGTCTGCTGAAGCAG
CGCCTACAGGCACCTCTTCCCCCAGGTGCTCTGTCCCAGGGAGATGGGAATTTTATCTATAAGCCCCTGACTGGGGCTG
CTGCCTTTCTTTCAGAAGTGCCCTGCCCAGAGAGGAGGAATCTAGGAAGGCAGTCTGGCTACAGTGGCTTTGTGGAGCT
GAGCCCAGTTTGAACTTCCTGGTGGCTTTGTTTACACTGTGAGGAGAAAACCGCCTACTGAAGCCTCAGTAATAGCAGA
CACCCCTCCCCTCACCAAGCTCAAGTGTCCCAGGTCCACTTCAGACTGCTGTGCTGGCAACAAGAAATTTAAACTAGTG
GATCTTAGCTTGCTGGGCTCCACAGGGGTGGGATCCGCTGAGCTAGACCACTTGGCTCCTTGGTTTCAGCCCCCTTTCC
ACAGTTGTGAATGGTTCTGTCTCACTGGCCTTCCAGGTGCCACTGTGGTATGAAAAAAAAAAAAAATCCTGCAGCTAGC
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CATGACAAGAAGTGATTTTTTTTTCTCAAGAGAAATGGAGGCTTTGGACATTAGTGTCATAGCAATGTCATGTAGAACA
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ATACTATCTATATATCTAATAATCCAAAGCTTCATTTATGAACATATTGCTTCTCAAAATAAAAATTTGGAGCAGTTTG
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GAGCCTTTCATGAGCTTTTATTTTAACCAGCTAAAATACTAAAATACTTTTATTTTAATCAGCTAAAGCATTCAACTTA
TAGTGAGGAGAGTTTTGTTTTCAACACAGTTACGAAAGAATTCGGGCTCACTTAATTGTAAATAAAAATCTTAAAGAAG
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TATTACCTCATATCAATAATCCTAATTTAAATGGTTAAGAACATGGAAATAATTTCCATGAAGTATGCATTTCTGAGTA
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GCTTTTTCTGTGTGATGAGCTGTAAACCTTCATATTAGAAAAACTCAGAAAAGAATTTTGCTTAGACGCTAATCAAATA
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GTTAAGTGGGGAAGCCTGGGCAGCCATTGTGCTGTAACTGGCTCTGTTTATTTTTTGCTCTTCAAAAGAGAAAGAAAGG
AACCTTAGCACAATAGCAGAATTTCCTGATGGTGGCTATTACAATTTTACCACTGAGGAAAGGACATCTATGGGTCTTT
GAAAAGCTAGGAAACATCTTGAATATCAGAAATTGTAAATGAATACTACTTGGTGTAGATTAAACTAAAGACATGGGAT
TATATGGTCTCAAAGCCACAGATGTAGTTGGGTCCTAAGAACCTTGTCATATATATCTATATTTTTTATTTTTTTTATT
TTTTTTCTTTTATTATTATTATAGTTTAAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTACATGTGTATACAT
GTGCCATGCTGGTGTGCTGCACCCATTAACTTGTCATTTAGCATTAGGTATATCTCCTAAAGCTATCCCTCCCCCCTCC
CACCACCCCACAACAGTCCCCAGTGTGTGATGTTCCCCTTCCTGTGTCCATGTCATCTCATTGTTCAATTCCCACCTAT
GAGTGAGAATATGTGGTGTTTGGTTTTTTGTTCTTGTGATAGTTTACTGAGAATGATGATTTCCAATTTCATCCATGTC
CCTACAAAGGACATGAACTCATTTTTTTATGGCTGCATAGTATTGCATGGTGTATATGTGCCACATTTTCTTAATCCAG
TCTATCATTCTTGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATAGTGCCACAATAAACATACATGTGCAT
GTGTCTTTATAGCAGCATGATTTATAGTCCCTTTGGGTATATACCCAGTAATGGCATGGCTGGGTCAAATGGTATTTCT
AGTTCTAGATCCCTGAGGAATCGCCACACTGACTTCCACAATGGTTGAACTAGTTTACAGTCCCACCAACAGTGTAAAA
GTGTTCCTATTTCTCCACATCCTCTCCAGCACCTGTTGTTTCCTGACTTTTTAATGATCACCATTCTAACTGGTGTGAG
ATGGTATCTCATTGTGGTTTTGATTTGCATTTCTCTGATGGCCAGTGATGGTGAGCATTTTTTCATGTGTTTTTTGGCT
GCATAAATGTCTTCTTTTGAGAAGTGTCTGTTCATGTCCTTCACTCACTTTTTGATGGGGTTGTTTGTTTTTTTCTTGT
AAATTTGTTTAAGTTCATTGTAGATTCTGGATATTAGCCCTTTGTCAGATGAGTAGGTTGCGACAATTTTCTCCCATTT
TGTAGGTTGCCTGTTCACTCTGATGGTAGTTTCTTTTGCTGTGTATATGGAACTAAAAAAGAGCCTGCATAAGCCAAAA
GAACAAAGCTGGAGGCATCACACTACCTGACTTCAAACTATACTACAAGGCTACAGTAACCAAAACAGCATGGTACTGG
TACCAAAACAGAGATATAGATCAATGGAACAGAACAGAGCCCTCAGAAATAACGCCGCATATCTACAACTATCTGATCT
TTGACGAACCTGAGAAAAAGAAGCAATGGGGAAAGGATTCCCTATTTAATAAATGGTGCTGGGAAAACTGGCTAGCCAT
ATGTAGAAAGCTGAAACTGGATCCCTTCCTTACACCTTATACAAAAATCAATTCAAGATGGATTACAGACTTAAACATT
AGACCTAAAACCGTAAAAACCCTAGAAGAAAACCTAGACATTACCATTCAGGACATAGGCATGGGCAAGGACTTCATGT
CTAAAACACCAAAAGCAATGGCAACCAAAGCCAAAATTGACAAATAGGATCTAATTAAACTAAAGAGCTTCTGCACAGC
AAAAGAAACTACCATCAGAGTGAACAGGCAACCTACAAAATGGGAGAAAATTTTCGCGACCTACTCATCTATATTTTTT
AATGGATTTAACCAGCAAGAAAGACCATGGAGCCACCTAAATTTTTCCAAAATCTGCAAAATGAAGGTGATATAAATAT
GTCACTTAGACAATATTTCATTTTTGATATAAAATTTTATTTTTTATCAGTTTGATAATATGCATAGGACTAAAAAATG
CAGTTGTCTTAAAATATTTTAGGGTTGCTTAGGAAATCACTTTAAAAATAAAAAGTGTCAGAATAAAAGTTGTCTGCTT
ATGTTCCATATTTCAGAACTACCTTTGATTTCTTTAGCTAAACAATATTGCACATAAATAGGTTAGGAATTATAGACTT

Fig. 9.123

TCAGATGTGCTACCTGTCTCCCTTCAAAACACTCATTTAGGTAATGTATTAATTATTTTAGAATCACCTGTCTTCTCT
GCTTCAGCAAAAACCCCACCAGGGCAGAGATCACTCTCCCTCTTGTTTGCTTTGAATTTTTATGACTTAGCACAGTGAT
TGGCACATAAACATTATTAAAACCAATGAATGAGGAAAGCAACGAATAAGTAAACAAATGGGCCCAGACTAAAAAGTAA
GTTATATGTATTAGTGAGAGTCAATAATAAATTAATGAAATAATCTTTTATTTGAAACTGAAGCAAATTAAGGGAAATT
TATGAACCTTAAATCTTTTTGTAAAGATCTAGTACCAATAAGATAAAAAAAATGCTCATCCTTTTTTCCATTGAAATGT
TATGTTCAAATGAGCTTTGTTTCTATACTTTATACATCAATTAAGCTGAATTCATAGGTGCTAAGCATTTTAACATATT
GTATTGCATGTAATATTCCCTAATGCCCCAAACTTCAAGATTATATAATGGCTTACTCTCTCCCTGTCCCTACCCACCA
GATAGTGTTATCCACATACATTCTCATCTAGTTTTGTTCTGTGATGAAAAACCATATGCGTATCCTATTCCTATGTGAA
TTAACCTGGCATGCAGGTAACTGAAGTGCATGTGATCTGGTCTCTGCTGACATATCACAATGGGCCCCCCTCCTTGCAT
GGAGGTAGCGTTTTTTATAAGACAAAATGTTTTTAAATAGAACACATTTCAGATTTCAGATTTTATATGTATTTTGTGT
TTTTCCTCCCTCTACCCCTTTCCAAAATTATGAATGAAATTCTAGGACCATTTATAGACAAAGCACAGTTTAGTCCGAG
TAAACCAATGGACCCTGAAGTGTCCAAGTCAGAGTTTATTTGCAGAATTTAATTCATTCCCACAGAGATAGGCAACCCA
GGCCTGTGAGGACACGAGGGTAACTAGGCAACAAAGTGCCGTAGTCAGGCTTGTGTTTGCTTTTTGGTAAGAGGACAAC
ATTGACTTCAGTGTCAGGGCATAAAGGAGACTCAGGACTTATTAATTTTTTCCCCATAATTCTGTGAACTTTGTGAAT
TCCCTAATATTCTTTTAACAAGAGTTCGGAGACATGAGTTTATGTGCCTTCTTGGATATATTCACGGGAGTTTGCAGAG
AAAGTTGAATAAATTATTAGGTTAATGGCCTGTGTAAATTCACCAACACCTTTTCACTATCTCATCAATCATCCTGTTT
GAGTTATTGTGATTCACTCTGCTGATGAGCTCACACCCTTTTTTCCTGATACAGGAATTATTGTACACCAGGGGACTGG
ATTTTAAACAAAACGTATTCCTTAGAATAACTTGAACAATGGATTGGTGGGTCCTTACACTATTATGTGCTGTGTAGCT
GTACAAGTGTGTCTGCATGAGCTTTAGGACATTATTTGAGATATTTTAAGCTATGTGTACCTCATGAACTTGTAGCTGA
TTTTCCTTAGTTCTTTTAAAATATTTTCTCAGAAAACCAACAGTAAAATCTATCAGGTTCACATGAATACACTCATTTG
TGTCATATCAACCCAAAATGAATATGATCTTCCAGGTAATGATGAAGGATGATAACTATAATATTTCCAGCCAAACTTT
ATTTTGAAACATCACTCAGTGTTTCACATGTTTAGTGGCTGTTAAATTCTATATGTCTAAGCAAACTGTGAAGAGCATA
ATTAACTTATTTGGTTGTTGTGTATCTTTTAAAATCACAGTTTGAATCTGCTGGGAATGTTATAGTGGCACTAGTAGCA
AAGGAATGGCAAGGATGTTAAGACTTTCTCATGCTAAGACCCCAGCTTGGTATTGAGTTTTTAGGAGGGGCCCGCATGA
CATCTCTAATTGCTTTGGCAATCCAATTATTGAGACAAGTAAGTGAGCCCATCGGGTGCCTCCCAAGGAATTAACTTGG
TCATTTGATATAATGTTGCACTCTCCCTATTTGGGAGGAGGGGTGGCCACCCTCACCTCTGCCATTGAAGATTAACCCA
CTACAAATTTTCAAAAATATAATATCTAATTTATTACACAGACTATCATATGGGTTTCATAATCCTTAAGTATCTCTAA
ATTTTATTATTATTTTAGATTTTTAAATAAGACTCCACCTAACTTGATGGAAGGAAAAGGGGGTCTAGAAGCATACAGA
GTTTGGCTCTTGGTTCTCAGAGTGACTCGCCATGTGAACATGGGCAAGTTATTTAACTTCTTTGAGCCTTTTGAATTTT
AATCTGTAAAACAGAGACAAAAATGCCTTCCTCAGAGGGTGAAAATAAGGATTAAGTACAATAATGAATGCAAAATACC
TGGCAGAGGACCTACCTTGATGTGCTATTCTCAACATTGATATTTAATCAGTATACACAAGTATGCCCTTTTTTTTTTT
TTTGAGACGGAGTCTCGCTCTGTTGCCCAGGCTGGTGTGCAGTGGCGCCATTTCAACTCACTGCCACCTCCGCCTCCTG
GGTTCAAGCAATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCATACGTCACCATGCCCGGCTAATTTTTG
TATTTTTAATAGAGACTGGGTTTCGCCATGTTGGCCAGGCTGGTCTCGAACTCCTGACTTCAGGTGATCCTCCCGCCTC
AGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCGCACCCTGCTGCATGCACATTTTGCCTGGATGATCTTCCAG
GCTACCATGTGGATCTCTCTCATACAGCAGAGGGAGAGTTGTACAGCAATGAGGGCTTCAGAACTGTGTCTGACCCATG
CTGATTGCTCAGTGCCCCTGAGCACAAGTTTTTAAACATTTTGAATCTCACCCATAATATTTCTCATCTTGCAGAGACA
GAGAGCATTGTGGCTATATAATGCAGGTAAAGTACCTAGTGTAACGAATAACATGCGGAAATGATAAATATCATAAGTT
GTATTACTGCCTGTGGTAGTCTGAATAATGGTCCTCAAAAGATATCCAAGTCTTAATTTCCATAACCTGTGAATATGTA
ACCTTATATGTCAAAAGGAACTTTGCAGATGTGGTTAATTTAAGGATCTTGAGATGGGGGGATTTTCCTTGATGATCCA
GGCAGGCCCTAAATGTAATTATAAAGGGGCCTTTTAAGAGAGAGGCAGGAAGGTCAAAGGCAGAAGAAGGCAATGTGAC
AGCAGAAGTAGAAATTGGTGTGAAGCCGCAAGCCAAGGCATGCAATGCTGAAAGCCTCTAGAAGCTGGAAGAAGAAAGG
GATGAATCCCCCATTGGCATCTCCAGAAGCAATTAATCCCACTGACATCCTGATTTAGCTTAGCTCTGTAAGACTAAT
TCAGGACTTCTGACTTATTTGTGGTGTTTTAAACCACTCAGTTTGTGTTAATTTGTTGTAAGGGCAATGGGAAATGAAT
GCACTTCCCATCCATAACCCTGTCTCTAGCTATGTTGAAGTCTTTACCATCCCCCAAATCTGACTTTTACTTGCATGCT
TCTTGCCTTTACATATCTGCTTTTCCTTCCTGCTTCTTCCTATCTCCCACATCATTGCCTTTCTCACAACTTCTCTACT
CAGCAAATTCCTGCTTATCCTCTGAGAGGGAGGACAAGATCATCTCAGATATAGTTTGCTAGCTAAGAAAAGAGTCCTG
AGACTGCTTTGAAATCTTGTGGTCCTTTATCCATAGCTCATGTAAATAACTCTGAGCTAGCAGTGTATATTATTTTTAT
TTCATCCTGGAACTATGTCTTAGCAATATTTTTATTGGAGAAAAAACTGAGAGCAAACTCTCTGTTTCCCACATGCCTA
TTGCCAAATTTCTCTGGGTGCTTTACTTTCACTGCACTGATTCTAGAAATTGTATTGACAACTGTGTTCTAAGATGACC
CTTTGATTCATCCAGATGGTGTGAAAATGTTCCTCTTCAAAAACCCCACACTGCTTTTCAACATCCTAATGGGTAGAAT
CTCTAAATCCTTAGGGTGTCAACAAAAGCAAAGGGCATATTTACACTTCAGTTGGGTGAAATTAATTAGCATGGAAGTT
AATATTTACAATTAATGGAGATTACCTGACTTTAATAGTGAGATTGTGTAGCTACTTTGTATCACTCACTCTTTTTTTG
TTGTTGTTTTAGAAATTGTGGCAAAAAAATGGATAAAATAAAATTCACCCTTTTAAAACATTTTTTGAATTCCTGGAGTG
TAAAAGTGGTAGGATAACCAAAACATCCTCTTTCTTGTTGAACCATCAACAATTGTCTTTTGAAAAGAGGTTTGAATAT
CTTTTCTTTGAAAATCCTCGTGCAAAACTTCACACCATGATCATTTATGAGGTAGTTATCAGACACTGGAGATGAATTA
CTGGGGATTTTTGTGTTCTGGTTCTCAGTATACAACCAAAGGTAGAATATTGACATTGAAAATAAATGTCACTCGTTTC
TCAAGGAAAATTTGTAGTTTACCGAACAACAGCACAAATGAAAGCTGAGATACTTTACCAGTGATATTGTAGGTCTCAG
TGAGTAAAAACTCAATTAAAAGTATATTGGGGTGGCGGGGGCACTGTGTATAGATAGACCTGGACATGATCTCTAATCA
CAAATGCTACTTTTAGAAGGGCCAGATTCTTGATACAGAGACATTTTATTGGTGGCAATAACCATGGCTTGTCCACAG
AATGATGCCGTATTATTCTCCTGACCTAACTTCAAAGAAATAAAGAGTTTGCAAGAAGAACTGCAGTTCTTCAAAGTAC

Fig. 9.124

GCAATATGGATTTCCAAGATGAATGTAGTTTCTCTCTCTGAGGAATTCTGAACAGTGGTAAAGTTTCACAAGTTTATGC
ATATCTTTTGCTCTACATCCTTCCCTAAAAGAACTTGTGGCAACAAACAAAGGGAAAGAAATAACATTTTTTAATAACT
ATGTGGAAAGCTCTATAGTAAGTGCTTCACATGTTACCTCATTTAATTCTTACAACTACCTTATCTAGTAAATTATCTC
CCATTTGACACTTTAAGGAAGCAGCTAAGAGATGTTTCATAACTTTCCTAGAAAAGGTAGGATTTGAATGCAGGTTTGT
ATTATTCCAAAGCTCACAATGTGCTTTACGCAACATCAAAGTAACATATTGCGGGAATGAGTACCTTTCCCATTTAAAA
CAAATGAGTCCTGGAAACTCTTACCCTGTTTAGTTATGGAATGGCTCAGAAAATAGAAAGTGTTGAGATCATCAAAGAG
AGAAGTTAACAAAGAGCATTGTAATCCAGAAATAAGAACGCAATAGAGAAGTAGAAGTTGTGTGGCTAATTTTACCAAA
CTAAATAGCCTGAATTATTCAGTGTGACTATACACATTGATCAAATTAAATGAGCATACCATAGTCTAAAGGGGACGAG
ATTTATATTCTATCCAAGAAGTCATTAATTATGTTTGTACTATCTTCATCATGGTTATCATTTTTCTTAGACATAGCCT
AATCTATAAGATTTTACTGTATTTCCCTGAATTACTAAATTCTTCTATTTTTGAAGTTTTACTAAGATTTTATTGTATT
TCCCTGAATTACTAAATTCTTCTGTTTTTGAAGTTTTACTAAATACTTCAGAAGCTTTACTAATTAAAAAGGTAATTTA
TAATGTTTATCACTAACCAGTTGATAATAAAGCGCTTCCTTATAGCTTCTTAAGATAATAGCTAGAAAACAAAGCTGAT
TTTAATTATTCTTGTAATTTGCTTCAACTTCACTGACAGTCTGTTGTATATTTTCTGCATATGTAATTACATCAGGTTT
TGACTATTTTCTCTGAGGTAAATAATTCCAATTACTTTAACCTGTCATTGTTTCTCTTTCTCTCTCATTTCTTTCTCTC
TCCCTCCCTCTCTCTTTCTCTTATTATAAGACATATTATTTGTTTAATTTTAATAGCTATTCCAGCAGTTAAATATTCT
TATCATAAATTTCTTGCAATTTTTAAATGTGGAATTCCAGTACAAAACTTTGGTTTAGCAGTAGGTAAAAAGATAGATT
GAAATTTATGTAAACATATTATTCTTCATCAGGCAGGGCTAGCTGACTGACATCTGCTTTGGTTTGGATTCAAATACAG
ATTTAAAGGGAGGCTATACATGGAAATTATCCCCAGGCTCCTCCCCGCTGCTGTTCCCAATTTCTGCAGCAGCCTGCAT
GCTTGTATTTAGGATTCACCAATTTTTTTGGCCCTTGTGTGTGCTTGGCTTTTGTTTTGATTTACTCTACAATGGCAGG
ATGTTCTGGGAACTGATGTGATGAAGTAAAGGAAAGCAAATAGCCTTTGTCATGTTTAATTTCCCTTAAAATCTATTTG
CCAGTGAAAGGCCTTTAAAATTTTTCATTATAATTAAATGTTTGTTAAAGCAAAAAGCCTCTTCTTGTATCTATAGACT
AAATCAGGGTTTCTTTAATCATAGGTGGTTAATCCTCACTACTCCTTTACCCAAATACATTTCATAAGATGCTAAAGAT
GTCAAGGAAAATTCATATCTCTGACTAACAGAAAATATTCTTTCACAAATAAAATGTGAAGTGTTCTTAGTTGTCCACT
ATTCTTTTAGGTCCTACATTATTCTATATCTATTTTCAACAAAAGCATAAATTATGGGAACATTGAATTAAAATAACAT
GAAGGTCCATACCATGTCCCTGGATCAGAAGTCTCCAAATCATAAAAATTGCAGTGGTCCATCAACTGATCTGTAGATT
TGATATAATTTAAGTCAAAATACTGACTTGTTTATTTTGGGGGAACTTGCCAATCTGGGTCTAAAACTTACACGGAAAA
GCAAAAATTAATAGGCCACTGTAGATTTTCCTTACGAGGTAGTGTGAGTTTTTAAATTCATTTATTTATTTATTTTTGA
ACATTTAATTTAGGTTTGGGGTATATGTGCAATTTTGTTATAAAGGTAAACTCGTGTCACAAAAGCATTGAATTTTATG
CCATGTTATCTATGGTTGAAATATAATAGGGAGCGAGTTTATTTTAAAATCATGTGTCTTTTTAAGATTTGATTTATGC
TGACTTCAGAATGTGACGAGTTTTAGAAATCTGAGTGTAGGAATGAATGTTCTATTGGAAGTATCTAGTTTATTGCTTT
CAGCTCTACTGATCATGGATATTAACCAACTCTTGTTTTTGTTTTTTGTTTTTTTGTTTTTTGAGACGGAGTCTCGCTC
TGTCGCCCAGGCCGGACTGCGGACTGCAGTGGCGCAATCTCGGCTCACTGCAAGCTCCGCTTCCCGGGTTCACGCCATT
CTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGTGCCCGCCACTGCGCCCGGCTAATTTTTTGTATTTTTAGTAG
AGACGGGGTTTCACCTTGTTAGCCAGGATGGTCTCGATCTCCTGACCTCATGATCCACCCGCCTCGGCCTCCCAAAGTG
CTGGGATTACAGGCGTGAGCCACCGCGCCCGGCCTTAACCAACTCTTTAAGCAGTGTTTGGCTCATGGACATTGGGGTT
AAGTCTGTGTAATTAGGGCTTTAGGATATTGGGATTAATTAAACCAGTTGCTGCTTTAATCCAGCATTTTAGGCATCAA
TGGTTGATGATGGGAATGATTCTGTAACTTGCATTTATGGTCTAAGAGCTCACTGGTGTATATACCTGGGTTAATTGGG
GATTTTAGGTAGCCAGAATTGGAAAATAGAATGCACAGTATGAGAAATTCCCCCGTCTCTGAGGATGGGGGATGCTGGG
GCCCCCGTACCATCAAGTAGCACATCCACAACTCACTCCATTTACCACATCATCACCATCACCACCACCAACAAGCACT
TGACCTCCATCCTAACTTCAACAATCACCTTCAGTCTGCCTAACTGATGCTATGGAAGAACAACAGAGACTCAGAAGGG
TAAGAGGGTGGTGGTGGCGGGTGGTAGATGATGAAAGATTACTTACTGGTGTGAACCTTCAAGATTTGAGACAAGTCTT
AGTTAATTTGGAAAGTTTATTTTGCCAAGATGGCATTGAGGATGTGCACCCCTAACAGCCTCAGGAAGTCCTGACAATA
TATACCCAAGGTGGTTAGGGCATAGCTTAGTTTTATACATTTTAGAGAGACATGAGACATCAATCAATGTATGTAAGAA
GTGCACTGATTCAGTCTGGAAAGGCGGGACAACTTGAAGCAAAGGCAGGAAGACTGGAAGCGGGAACTTACAGGTCACA
GATAAGTGAGATGAATGGTTGCATTATTTTGAGTTTCTGATTAGCCTTTTTAAAGGAGGCAATCAGATATGCATCTATC
TCAGTGAGCAGAGGGGTGACTTTGAATAGAATGGGAGGCAGGTTGGCCCTAAACAGTTCCCAGCTTGACTTTTCCTTTT
AGCTTAGTGATTTGGGGGCCCCAAGATTTATTTTCCTTTCACACTGGGTATAAGGTACATGATTTGAGTGATGGATACC
CTAAAAGCCCTGACTTCACTGCTATGCAATCTATGCATGTAACAAAATTATACTTGTACCCCATACATTTATACAAGTA
AAAATAAATAAATAACAAAAACAAAACAAAAATAACAATGGCCCTAGCCATAAAGCAATTTTTAATTTAGCGGGGAGGA
CAGATATGTATCTAACCAGTTATACTGGAAAGTGGAGTGAGCTCAATATGCTAAAATAGAATTATTGTGCATCATAAAT
GTTTAAGAGGAGGGAAAGGGTAATCTGACTGGAGGGATTGAGGAAGATTAGAGAAGTTGTCATTGACTTGGCCTTGAGG
CAAAACAGGGGTTTATTTATTCAGCAAATCAATATGTATTGAGTGCCTAGAATTTAGGAATCATTGGAAGGGCATACTG
GGAAGAGATTATATTGAGATCAAAGATCAAAAGAGAAAAAAAATGCAAGGAAGTTTTTAGAATGTTGAGTCACAGAAGGG
TCTTAAAGCAAAGAACTATAGGAGGAAAGAGGCAGTTGAGGAATGTAAACTAGGAATATGGATCAGGGGCATTTCATGG
ATTTTACTCATTTTTTATACAAGTAATTGGGATACTTCCTTCAGTCAGCGGCAACCATGAAAGGTTTTGAGTTGAGTGAA
ATGAACAGAGCATGATTTATTGGTGGATATGTTGGAGGGAAGGAAAAATTATACTGAGGAAGACCAATTAGAAAAATTT
CACAATAGTTTAGGCAAACAATGAGGGCAGACAGACCCAGGATAGTGGCTGTAGAAACAAAGGAACAGATGTGAAGAAT
TTTATACAGATGTGTGTTGAGATTGCACAGTGGTGAAGGCAGGGCTTTGGGGGCACCCATTACTCAAATAATGTACATT
GTATCCAGTGTGAAAGGAAAATAAATCTTGGGGCCCCCAAAACATGAAGCTAAAGGAAAAAGTCAAGTTGAGAGACAGA
AAAGATAGAAGAAAAAGGCAAAGAGAGCTCAAAGGTTATCAGCCTGACAGTGATAAGTGATTAACAGAGGAAGAGTGTC
TGGGTCCATGAAATAGTGATGTATTTGGCAAATAGAGTCTATGTTGTCTGGGGTGTAAGCTAAAAGAATCATTTAGCA

Fig. 9.125

AATGGAGAAGTGAAATAAGAGAGAAGTATTTCAGGGTCCTCTGTTTGGAGGTGAATGACAGTTGAGGCCATAAGAGGAC
ATGATCGTATCAGGCATAGAATATAGAACAGAGATTCTCAGAATTTTCCAACTCATTCACAATACCCAGAACAGCAGAG
GACACGAAAGTTTTAACTCAAGTTATTTGATGGCACAGTTCAAAATGCAACATTTCTTTAGTATCATGTGTTTTGCTTT
AAAAATATGGATAGATTCTTTATTCCACTGCATGATGTAGTCACACATTTCTTCCTGATTCCAGCACTAATGGACAAGG
TTTTGCTGTATTGAGATTCATTTATTTAATCAACAAATCTTTATTGAGTGTCCAGCATGCATCAGACACCATTCCAGGC
CCTGGGGATATGTCTGTGACTGAAACTGGCAAAGCCTGTGATGACGCTTACAGTGTTGTGAGAGGGAGACAGACAAGAG
ACCAGTAATGGATGAGATATTTCAGAAAACAAGTACTATGATGGAAGTAAAACATAGTGATGAGATGATGAGTGGTGGG
GGGCAACAGCAAAGACATGGAGTCAATCTAGGTGCCTATTGACACCTAGGTACATATACACCATGTGGTAAATATATAC
CATGGAATATTATGCAATCATAAAAAAGAACAAAGTCATGTCCTTTCAGCAACATGGATGTAGCTAGTGGCCATTATCC
TAAGTGAATTAAAGCAGGAACAGAAAACCAAATACCTCATGTTCTCACTTATAATGGGAGCTAAACCCTGGTTATACAC
AGATATAAAGATGGAAACAATAGACACTAGAGACTCCAAGAGGGAAGAGGGAGGGAGTGGAGCAAGGGTTAAGAAACTA
TCTATTGGGTACAATGTTCACTATTTAGGTGACAGGTTCAATAGAAGAGCAAACCTCAACATCATGCAACATATCCATG
TAACAAACCTACACATGTGCCTCCTGAATCTAAAATTAAAAAGAAAAAAAGAGAGAAGGAAAAAAATGGCGGGGGAATG
AGAGGGTATGACTAAACTTCTCTGAAGAGGTAACCTTTGAACTGAGCCCTGAATAACAACGAGGATACAGTTATACTTT
GGGACAAGTCACCTGGACAGAAAAAATTTGCGTGTGTAAAGGCTTTTAGGTGTGAGAAGCTCATTAGTATGGAGAAAAA
AGAAGTCTACAGAAACATGAAGCAGAATGAAATTGAAGAGTGAGCACGGTTCTGGGATACCATGCTGAGAAGTAGATTT
TATTTTAAATGCCACAGCAAATCATTGAGGGTTTTCAGCAAGAAGATTAAACGATCTGATTTAAGTTTGTAAATGATTC
CTCTGCCTAGGGTGTGGAAAATGTGTTGCATGGGGCTAGAAGTGAAAACTGGGAAAACAGCTGAGGGGATGGCTAATGG
ACTTATCATGGTGTTGAAAGTGATGAGCAAAAGACTAACCCCTAAATATTATTCATCGAGTTTATCATTTTCCTGTATA
ATTGGACTGAGTTAAAGACAGCTAATCACATACATTCGGTTCAGTATCACTACACTTTTTCTTGTCTTGGTGTTTCCTC
ATTCTCAGGACTCAAATTAATTAAGTACATGTGAGCACTTTAAAGATTTTATGATCTGTGCATGAGGAATGATGTGTGA
AGATAAGGCCAGAATCATAAATGGAAGGATGATGCCATGTTGTCAGGCTGCTCTTGCCAAAAATGTGAATGTGTCTATC
TTACTGCTGAGTCATTGGTGCACTTGTCTACTTGTCTGGGTGGACTAAAAGAGTCTCTAGTCCACTGTTTTTGTTGCTG
TTGTTGTTGTTTTGTTTTAAACATTCCCATGGAAATATTTAGCAAGGACATTTTCAATGAAGAAATATGAATAGTGATC
TTTGTTTCGTGACTAATGCTGTAATTTTTGCACATGTAAATGAACTGAGCCTCAAATTATTCACATTCTGATATATCTC
TATTCAACTCTCAAACTATCATTTCATGTTATAATTTTGCTACCATTTATAAAAACCATCACCACATTACCTTTTTAAT
AGTTGAATGACAGTGTTCTGACTTTGAGGGAAAAATCTGCTAACTAGACAATCCCATGTGACCCACAATTTGTTGTTAA
GTATAAAAAATAAATTAACTCATAATATTTAGGATTTGTTTGTTTGTTGTTTCTGAGATAGGGTCTCACTGTATTGCCC
AGGCTGGAGTGTAGTGGTGCAATCTTGTCTCACTGGGTTCAACTGATTGAATGCAGTGAGACTCCACCTCCTGGGTTTA
AGTGATTAATATTTAGGGTTTTTTTTAAATCATGATGTCTTTGTTACTTACATGGAAATAAACTAATTTATGGTTGAAT
TAGAAAATTCTAACCATGAGTACTATTTATATTTTTCAGGAAGAATACATCTAGTAGTGGCACAAGCTTTCTAAGTCTC
TTCTCATTATATTAGAATTTTACCTAAAATAATAAATATTAAAAATATGGTATATTGTAAAATTTTCTAGCTTTACTAA
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TAAGACTATGTCTGCTTTACTTGGAGTTGAATCCCCAGGATCTAGCATAGTGGTTGGTATTCAAGAAGCTCAAAACTTT
GGGATGAATAAATAAAATCATTAGTTGCTGGAGTAGTCGGGGGCATAATGTCTTTGATTCAAACTATTGCTTCCAAAGG
TTTGCTTAACATAGATGTGAGTCTAACATTTTTCTTCTAATGCTCACATCTTGCTGCAAACGTTTTCATAAGTTCTACT
TTCAAGTTCTTTGGCAATATCTTGACAGACTACTTTATAAGTGAGGCCAACTAATAAAGTAGTTACATCATTTACATCT
GTATCTTCAGTCTAATAATTGGTATAAATCCAATTTATCTTCATATTCTTGATTATTCAACAATGCTTTGTCCTGTAAA
AATACACCTCAAAAATACATCTCAAGTGCCTCTTTTTGAATCAGAACAAATCTAATCTAACTTGCCCACACAGAGCTCC
ACCAAACTATCCCTTGCCAGGAGTTCTACCTTCCTTGCTGCTTTTGAAACAAACAAACCTTGATGATACTTCAAGCAGT
TTTTTTTTTCTCTGCTTGTTTGTGCGTTTGAAGCATTGCTCATAACCAAGATTTTGCTCTCTTGCCTTTTAACTTCAAA
CTGTTTTTCCAAATTGATTTATATGTTATATATTCAATGGATGTTTCCGTGGAACAATTTTTCAGAGTTTTCCACTGAA
CAGCTAAATAAGGCTCATTTTGTATCTCCACCGTGATTTAAAAACCTCTGTTTTAAATGAACATCAAAATATGACTTAC
AAATTTGTGGCCAACTGCAGTGCTCATTTGGAGTTCCATAATTGTGCTTGGGGACTGTTACATGATGCCTTAAATCACC
AAATGCCCTGTGATGTACCCCATGCTTCAAGGTTGTTCTGAATTCATCTCAGTATCTTTTCCATTTTTACCACTTACAA
GCTTTTGCTCCAAACATAACTGCTTGTGACCACCTCTGTAAATTTCTAATTGAAACTGTAATTTTAAATAAATACATCT
TTGAAACAATAAATACAGAGTGACAGTTCTCTAAAGTTAGAATCTCTAGACTTATTGCTATTTTCAGACTAGCTTCAAC
AAGAAATGCAACTAAGCATAGTTTCATGTCTGTACACAGAACTTTTGTTTAAGTACATTTGTGGTACTTGAACCACATG
TGGTTGAACCAGTGGTTATGTGTGTGCATGTTCAATCAAAAATAAAATAAACAATTATGGTTTGTAAGAAGACACACTG
TTTTATAAATTCTCTCTCTCTTTCTCTCTCCCTCTCACTTATAGTTGAATTAGAAAATTCTAACCATGAATACTATTTA
TTTTTTAAGGAAAAATCCATCTAGGTAGTAGTATAAGTTTTCTTAGTCTTTTCTCATTATATTACAGTTTTAGCTAAAA
TAGTGAATATTAAAAATATTGTATTTTGTAAAATTTTTTAGTTTTACTAAGACATTGTACATGTTGAGGAAAATCAAGA
GCAAAATTCTCTGACCCATTTTTTAGAGAAATACTAGCCCTATGGTTGGGAATTATTAGTGATATCTGTGGTCACAGTC
GTGCATACGTTCACTTTGATTTGATTACAGTGTTAGTGACACTTGCTTCCCCAACAACTCTGATGTACCATATTTTCCA
GTCACTCATTATATGTGAATATTTTCTACTTACAGGACTTAAAACATGAAGTTTGCTGACCTGGAATAGTATGAATTAT
TCTGCTTCTAAGGTTGTTTCAGCCAGCCTTATAATGCAACTAGTGTGAGAAGCAGTGACACAAAAAAGAATAGAGCCAA
ACTTCAGGTAACACCCTTTTAGGAGTGGAGAGAAGGGGACCTGTAGAAGTAGAGAAAGAAATCTGAAAAGGGGAAAACT
AGGAGCATCAGGGTGATTGATGCATGTGAAGCAGGAAGAAAGGCTTAAAAGACATTGTTAGTGGGGAAATGAAGACAGA
TAAGAAAAGAAACAGGCCTTTGGAGCTGAGGTCTAGGAAATTATTGGTGGGGGAATGCAACTGAAATTGCTAGGAGTT
GAGTCAGGCAGCTATGAGCAAGTTCAATGGTAGGTATAAACCATGCTTTCAAACAAAAAAGTTGAAATAAGAAAACAAG
AGCCCAGATGCTAAGGACATGGGGAAATTAAGAAAACAGTTGAGGTAGAGAAAGAATTTAAGGAGGGCTGAATGCTATA

Fig. 9.126

ATAGCTGCCATTATTTGACTGCTTATTATGCACCGTGGAGAGTTCTAAATGCTTTAGCTAATTTAATCTTCATGAGACA
CCTAAGAGATAAATCCTGCTATTATTATTCATATTTGGATAGGAGATTAAGGCACAGAGAGGTCGTACAAACAAGTGA
GTGTCAGGATTCAAAGAAGGAGGTTTTGCTCCAGAGGCCTCCTGAATTTAACCACTGTGCTAGAGACACAGGGACATTC
AATGGAGCATTAATGTCCCGAGCTGGTGACAGGTCGAGCTGAGGCTATAGATGTGTTGAGGAGTCAGCATCAGTGGAGG
AGGAAAGAGATGCGGATGGAGGGAGACTCGGTGTCTTTGAAATAGATAAGAGAGAGAGACAATGTAATGGTTTCCACTT
GGCACAGAAAGAAATGCCTTACTAATTAGAGGACCAGGGAGACACAAGAGGAGCCTAAGAAGAATGGAATGAATTAGAA
TCATCACTGTGGAGTCTGTGATAGGGAGTCAACTAAAGTGGAAATAAGTAATTACCAAATAACAATGAGGGGTCAGCAT
CGGCAAAGGAATATGTTTGTAATAGAGGCTTCGCAGCTGTATCTGGAGCCTGGGAGCGCAGGCTGAGAGGGACATTGAG
ATGTAATGAGGGATGTGACATCTTAGACAGAGAGAGAGCTGGGATGCTCTCAAGAACTTCATTGATATCCCTGTCTGTA
ATAGAAAGAGGTAAGTATAGCAAAAAAGTTAGAGCCATAATTGGTTTTCACATTTTAAAAATTGGATTATGATTAAAGG
AAAACATTTAAAGACCTTGTCTAAAGGAATATAAAATTCTTGAGTCTAGGCACTCTCCATAACTTAAATTAACTTCCCC
ATTTCTTCTACAGGAATACTCCTCTGTTATAAGGATTCAATAAATATGGTGACTTTATTGTTATTCGAAAGATTATAGG
GAACTTTAGGAGGTGGTATGGGTACAGAGGAGTCCATCTACAAAAACGTTTTTAGCCCATCTTCTAAGCTAAGCTGATT
TTGGAAAAGGAGCTCTTTTAAGGAGAATAAAGCTACAAAAATGACCTTTAAAACTGTCCTATCCAGACTCTGGCTCTCT
AAATTGGAATCTTTGACAAAACCACAGCTGGAAGACAGCAGCCAGTAATACAGCAGCCATTAATACAGCTCCATGTCCA
AAGAGGAGGGATGTTTGTTTCTACTAATTACACAAAAACATGCAATATTCAGCCAGGTGTGATGGCTCACACCTGCAAT
CCTTGCACTTTGGGAGATCAAGTCAGAAGAATCACTTGGGCCTAGGAGTTTGAGATTAGCCTACACAATGTAGCAAGGC
TCCATGTCTTTTAAAAAATAAAATTAAGGTAAAAATAAAATAAAAATGCAATATTTACTGCTAAGATGTGCTTCTTGAG
GATGGACTTGAAATGGTCCACCACCAGGACATTAAAGACAGGGTCTGCTCCTGCTTTCTCCTGAGAGAGGAAGAACACT
GGTTAGATTTACAGAAGTATCAATACCAATATTCTTAGTGTATTTAGTATTCCTGCATTTATAACAGAGCATCCGGTAA
TTGACTTGAAATTTGACCTCAGCTTTTCATCCAGTATGCTAATGATGGTATAAAATTTACACTCCTTACATAAATAAAT
GTACCCTCAAATGTGTCATTTTCCTGCATTGACAGATGGATCCCATGCTTAAAATTACCACAAATTCTTATTCTGAGCA
GCTTTGCACAGCACTCTGCATCCACTTTTGTTGTTTGCCACGTTATAGCACTGCTTGTGCCCTGAGCTTGCGTCTCAAG
GTGGCTACAGCGTGACATTTTCCTTGAAGAGCGATAGGCAGAATTTAATTGATTTCATTTTGCTTGGATTCTCAAAGGC
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CTAGGGACCAATGAGGTTTTGTGTAGGAGGGCTAACTTTTATTTTCCCCTTATAGTTCCTTTGTCTGGATTTTCCCCCT
TTCCTATCTATCTTTATAAAGAGACCTTAAATGAAGGCTACAGCTATAAGATGAACAAATAGCTGGCTATTAAAAATCT
CCAAATTGTCATATAAATGCAAACATGATCCCAAATGATTGGTTTGAATAAAATTCAGACTTTACTGATTGGAGGTGGG
CAATTCCCAGTTATAGGCTGACCTTCCACTTCCTTCAGAGCTAACCCTCTAAACAAGATTAAGCTTATGTCTAGGATGG
GAGAGAGAATGGCTGGAAGAAAAGAAGATGTTTCACTTCCTTATGTTGTGGCTTAATGTAATGGCTTAAGAACAATAAT
TATTTTTTTTCCTCACAATTTGTTAGGCCAGATCAGGTATTGGCTTGGTGATTCTTCTCTTCATGTGGCATCAACCTAG
CTGCATTCAACTGGTGACAGGACTGGGCTGAGCTGGGCTGGGCTGGGTTGGTCTGGGCTGGAAATTCCAGGAAGCCTTC
ACTCCTATCTGTGGTGCCTCAGGGCTCCTCTGTATATTATCTTTTTTTCTTTCACTGTCATAGTGTTCTCTAGAGAAATA
GAACCAATAGGCTGTGTGTGTGTATATGTATACATACAGCCTGTATGTTTGTGTGTGTATGTGTGTATACATAAACATA
CAAATGAGGCATGCCTCATTTTATTGTGTTTTGCTTTATGGTGCTTGACAGATATTTTATTTTTTCACCAATTGAAGGT
TTGTGAAAACTCTACATCTAACAAGTGTATTGATGCCATTTTTCCACAGCATGTGCTCACTTTGTGTCTCATTTTGGTA
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CTATCATAATTGTGTTAGGGTTTCAAAAACCATGCCTATATAAGATTGTGAACTTAAGTGATAGATTGTGTGTTTTCTG
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CAATATTAAAATTAGGCCAGTTAATAATCCTACAATGGCCTCTACATGTTCAAGAGTTTTCAATCTTTTTCTTTAAATT
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AGCAGCTATCCAAGTTGTGAATGCAAAAAAATAAAATAAAAGTTCTTGAAGTTCTGAATTCTTGAAGCAAAGAAGTTCT
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AACTCTCCTTATTTCTTTGAAGGCTGAGAGAGGTGAGGAAGCTGAAGAAGAAAAGTCAGATGCTAGGAGAGGTTGGTGC
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AGTTACCCAGACCTAGCTAATGCCATTGATCACAGTGGCTACACTAAATAACAGATTTCAATGTAGAGGAAACAGCCTT
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CTACTCTTAGGGCTAATGCAGCTGGCGACTTTAAATTAAAGCCAGTGCTCATTTAGCATTTCAAAAATCCTAGGGCTCT
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GCAGGTTGTTCAGTTTCCATGTAGTTGTGTGGTTTTGAATGAGTTTCTTAATCTTGAGTTCCAGTTTGACTGTGATGTG
GTCTGAGAGACTGTTATGATTTCAGTTCATTTGCATTTGCTGAGGAGTGTTTTACTTCCAATTATGTGATTGATTTTAG
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GTTCATGTATTGGGTGCATATATATTTAGGATAGTTAGCCCTTCTTGTTGAATTAATCCCTTTACCATTATGTAATGTC
CTTCTTTGTCTCTTTTGATCTTTGTTGGTTTAAAATCTGTTTTGTCAGAAACTAGGATTGCAACCCCTGCTTTTTTCCG
CTTTCTATTTCTTGGTAAATTATCCTCCATCCCTTTATTTTGAGCCTTTGTGTATCTTTGCACATGAGATGAGTCCCT
TGAATACAGCACACTGATGTGTCTTGATTCTTTATCCAGCTTGCCATTCTGTGTCTTTTAATTGGGGCATTTAACTCAT
TTACATTTAAAGTTAATATTGTTATGTGTAAATTTGATCCTGTCATCATGATGCTAGCTGGTTATTTTGCAGACTTGTT

Fig. 9.127

GATGCAGTTGCTATATAGTGTCCTTGGTCTTTATATTTTGGTATGGTTTTGCAGTGGTTTGTAATGGTTTCTCCTTTAC
ATAGTGCTTCCTTCAGGAGCTCTTGCAAGGCAGGCCTGGTGGTGACTAATTCCCTCATCATTTGCTTGTTTAAAAAGGA
TTTTATTTCTCCTTTGCTTATGAAGTTTAGTTTGGCTGCTTTGAAATTCTGGGTTTGAAATTCTTTTTTTTTTTTAAGA
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CAGTGTGGCAATTCCTCAAAGACCTAGAACCAGAAATACCATTTGACTCAGCAATCCCATTACTGGGTATATGCCCAAA
GGAATATAAATCATTCTATTATAAAAATACATGCACATGTATGTTCATTGCAGCACTATTCACAATAGCAAAGGCATGG
AATCAACCCAAATGCCCACCAATGATAGACTGCATAAAGAAAATATGGTACATATACACCATGGAACACTATGCAGTCA
TAAAAAAAATGAGATTATATTCTTTGCAGGGACATGGATGGAGCTGGAAGCCATTATTCTCAGCAAACTAACTCAGGAA
CAGAAAACGAAACACCACATGTTCTCACTTATAAGTGGGAGCTGAACAATGAGAACACATGGACAAAGGGAGGGGAACA
ACACACACTGGGGCCCATTCAGGGGGTGCTAGGGGAGGGAGAGCATCAGGATAAATAGCTAATGCATGTGGGGCTTAAG
TCCTAGGTGATGAGTTGATAGGTGCAACAAACCACCAGGACACACATTTATCTATGTGACAAACCTGCATGTCCTGCAC
GTGTATCCAACAACTTAAAATTAAATTAAATTAAATATGCTAAATCTACTCTCTTTGTGCTCTATAAATGGAACAACAA
AGCCTGTATTACCGTATTTCTGTCTGCAGCATGATATACTGAATATTTTAAGCCCACTATTGAGACCTACTGCTTAGGA
AAAAGAGATTTATTTCAAAATATTACTGCTCATTGACAACGCACCTGATCACTCAAGAACTCTGATGAAGGTATACAAG
AAGATGAATGTTTCTCTCATGCCTGCAAAAACAACATTCATTCTGCAATCAATGGATCTAGGAGTCATTTTGACTTTCA
AGTCATACTATTTAAGAAACACATTTCATACAGCTATAGCTGCTATAGATAGTGATTTCTCTAAAGGATCTGGGCAAAG
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GCCAAGAAAGTGATTTCTTGAAATGGAATCTACATCTGATGAAGACGCTGTGAACATTGTTGAAATAGCAGCAAAGGTT
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TACCACCATTTAGGCAAGACCCTCTGTCAGCAAAAAGAGTACAAGTTGCTGAAGGCTCAGGTGATTGTTAGCATTTTCT
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GCAATGTAAACATAACTTTTATATTCACTGAGAAACAAAAAAATTCATGTGAGTTACTGTATTACAATATTTGCTTTAT
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CATGGTGTGAGGAATAGCATATGTGGGCAGGGATGAGGGGAATAGTTGGAGACTAGCTATCACAATCTTCCCTCTGGCC
ACAGCACTTCTTGTCCCTTTTCAGAAAGTCTCATCACATTACAGTGCTGGGCCCAGCTTCAAGGTCCAAAATCACATAA
TCTAAATTGGGTATATTTAAAGTTGATGTTCCCTCTTTATCTAGATACTTGTACCTAAAATGATACCTTCTGTGTAATC
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AATGAGAGGCACATAGCAATCGGTGCTTCATAAAAATTCTGAGATCCAGCTGGGAACATGTTACCAATTCCCTCAAATC
TAGGTTTCCTGAAAAGGATCCTGTTCTCTGGATGTGGATTTCTATTCCATTGTTTTCAGTGCCTGTTGACTCTCTCCTC
TAAGTTAACCTTCCTTTTCTGTAAGAAATGGCCCTCATTCGCAAACGGAGTCACTTTGTGAGACTATTTATTCCATTAA
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AGACACTTTTCTTCTTTAGACTGAGAGTCAGAATCCTGTGCAGTAACGTTTTTAAGAGTTTAATCACCCTTGTCTCCTA
GCAGAGTGGAACTTATAAGGGTTTTAAGAGGTATCTTACTACCACATTCTTGACTTGATATTTACCCTGAGGCCACATT
GTACTAGCAGTACTTGATTTGATCAGAGACCATTTTTTACTCTGAAAACCTTCTGCCATCTGGAGGGGTTGAGAATGAG
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GCTGGTCTGGGCTGGATGGTCCAAGAAAGTTTCAGTCATATACCTGGCACCTCTGAGCTTTTCCATATGGCCTCTATGT
GGAATCATCTTGGGCTTCCTAATAGTATGGCTGATTCAGACTGGTCAGACTTTTTTTTTTTTTTTTTTTTTTAAAGTGG
AGTCTTGCTCTGTTGCCAGGCTGGAGTGCAGTGGCATGATCTCGGCTCACGGCAACCTCCGCCTCCTGGGTTCAAGCAA
TTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGACTACAGGTGTGCACCACCATGCCCAGCTAATTTTTGTATTTTTTAGC
AGAGATGGGGTTTCACCATGTTGGCCAGGATGGTCTCGGTCTCTTGCAGGCTGGTCAGATTTTTTATATGGAGGCTGAC
TCCAAGGGAAGGTGTTTTAAAGGAACAGGCCTGCCCAATGTGCAAGCACTTATCTAGCATTTGCTTGCATAATTTTTCT
AATGTGCCAAAGTAAGTCATATGGCAAGGCCAGGATCAACATGGGAGAAACTACATGAAGTGGCAGTGCCAAGAGGTAG
CATTTATTATGGGTCACCCATATAACAATCTCTCACACAGAGTAGTTTGGTAGCTGGACAGAAATAAATTTGTCATCTT

Fig. 9.128

CTTGTACCTTTTACTAGTAGTATAACTTAGGGCAAATTGCTGTGCTTCTGGGATTCTTATTTGCTGCTTGTAAAATAGA
AAACATGACACAGATGCTACTAGATCTTTGTGACAACTGTACACACATATGCATACACACACACACGAGGTACTCACAG
TGGTACTTAACAATGGCTACTATGTTTTAATGGTGTACTTGGCAGACCAGCAGTTAGGTTTTGAATGGACTAACTGTGG
TTTTATCATATCAGGACCAGGTTGTAATCAGAAATCAGCGCTTGCATAGCTCAAGGTGATTAAAGGTAAAAGGTTAAA
AGTTGAGAAGAAAGGTTGGTGTTAGATACTATTAGTTCTTGGCCAAAAGCTGTTGGCCTTGGGAGAGGTGGAAGTTTGA
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TCCAAAAAAGCGGAGTCAGGGCACTCATGAATCTAAACCAGATATAGAAGCTTATGGAGTCAGAGAGCAGAAATCAGGG
ACACAGGCAAGAAATCCAGGAAAACAAGAATTAGATATACCCAGTATGTTGAGACAAATAGCTATGGGGCGCAGAGGCA
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GCAGATCTTGAGCCATAGGTGGAAAAAGACATCTGGTTAGAATACGATGGCAGCAAATTGGTAGCTCCTGACATGCATC
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ACAGTTCAAAAAAATGATGCTATCTCTGCCATCTTTTGTTCCATCTGTAGAATAGTCCATTTTTTTGGTTATAGCAGT
CGTCTTCCTTGAATGGTTCCTACCCAGAGGGAAATCGGAATTGCCGGTACTCCTATGTCTCAGTTGCAGAAGTCAGGAT
TTTTTCTGAATCATTCTGAGCATCTTATCTTTCCTCATGCTGATTATTATTTCAGTCTGAAAGCTTATGCTCTCTTATA
AAGTCACATTGTACTTTCGTTTTCCATTGAAAATTCTGAATAGAATAAAATGAAATCATTTAAAGTCATGTTTAAGAAA
AGTAGAGTTTCTTGATTAAAAAGGAGAAATTTAGAGTGGCATTCAAAAGAAATACATTAAAAGGAAAAAGTAGCATGCA
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AGATTTCAATTATGAATGTATCTTAGGCATTGATAGGGAGTAATTTTTAGATCTGACTTATTTTTATATATTATTGTTC
ATTTTTATAGCTTTTCTGAGATTCTTGGCAGTGAGTCAGCACACAGCATTTCTACCTATAGTCCAATTTATATGAGTCC
TACTTTCATGCACCACTGTGATAGTGATGTCTCGGTTAGTGGCTATCATGGTCAGTAGCCTGAAGATCTATAGCATCTA
CATATTTAGAATGGATTTTTAATGTCTATGAGAGCCTTTATTTCTCCACTACCCGGTTCCTTTGTGGATCCTGAGTCTG
AGGAGAACATAACTGTCAATTAGAACCACTTTTTAAGAATTGCTGTAATTAAGATTTTTGATGACCGAGTTATTAATTA
GGAAACAGGGTCTCCATATTTTGCTCTGCTGCTTCTTTATGTCCTAGAGCAAGGGTCAGCATACTTTTACTGTAAATGG
CCTGGTAGTAAATATTTCCAGCTTTGTGGGCCACATCATTTCTGCTACAAATACTAAACTGCCATGTGGTACAACAGCA
GAAAAGGACCTATGCATAGACTGCTGTTTTTAATGTCAATATAGTATCAGTAGAAAAGACAGGGCTTAATAAAAACTTT
GTGTAATATGGTCTCTTTGGCATAAAATTAAGAAATGTATAGAAGTAAACGTTGTTACAAAAACTTTTGCAAATGTGTG
TCGCTTTTCCCAGCACTCACGAATAACAGTCATTTTTAACCAGACTTCTCGTTTTTGCCAAGTATTATTTGTTCTCATC
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ATAGATATTCAAATGAGGAATCTATGCACAGGTCTTTGACCCACCCATCAGCAGAACATGCCCTTTCTGGAGCTCCATT
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TGGTAAGGAATCAGAATTACAATCTTGTCTTTATTAGCACTGTGTTTGCATCAGTCCTCTCCTGAGAAACAGTGCAGGT
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AATGCTTTACTAGTGTTTACTACAAAGGTTTAAAAAATCATTACTACCTATAAAACTGAGTAAAATAAAAATGATTTAG
AACTAAAGATAATCTCAAAATTGCACATTAGATAGCTATCCTATGTTGTAGAAGATATTCAGTCTGCATCATAATATTT
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ACACAAAGCCTGTGGCCAAAATGAGGCAAGAGGAAGTATGAGGGGTACACAGATGTCATGTGCAGTACCACATACCACC
CCTGGGGAGTGATAAACTTTTTTGTGTATTTGCATTTGACTGATTTTTACTTTGTGAAAACATAATGTGCTGGGGAAAA
TCACATCTGAATCCACAAAATGTCCATGGTATATTGACATGTACCCCTAATTTATCAATTTTGTATGAATGTATTTGCA
TTAGAGAAACATGTTTCAGAATACATTGTGCTTTGCAAGTGTTTGCACTGTTGCAAACTATGTGCTTTATCTCACTGAA
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TTGCCAGTGGCTTTGAGGAAATACGTAACAGTATATTAGAGATGGGATTGAGTTATTCTAATTTTCAGGAAGAAGAGGA
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CAATGTACATACTCCAAGACCAACTGCCATTAGCCACATAACCAAAATTTAAATTATCTCAATTTTCTCCAAAATACTA
GGTCTAACCATAAACAAAACGTGAAATGTGAGCTTTTCATCCTTGTCAACATGACTCAGTAAAATTAAACCAATCAGCT
GCAGACAAATCAGCTTAAACAGTTTTACTTGTCCTAAAAGGAATATAAGTTTATGATAGCCAACCACAGCGAAGACAGA
TGCAGTTCCTTAATTATGCTTTATAAGCTGCATTTTAAATGCTGTGAACAGAGCTTCTTACCACTTTTGATTTGAGGTC
CCTGGTTTGCAAACTGTCCTTTTGTATGCTCAATAAACTTTAAAAAATTTTTCTAACTTGATCTGATTTTAACACATTC
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TAAAAAAAAATCTTGTGAGCCTTTAGAAAGGAAAGTGATGATCACCTGGAGCTTGTATTAGGTCACTAATAGTAAAGCA
TATCAGATTAAATAACTTACTTTTCCCATAAGACCAGTGTATCTGAGGAGTGCTGCTCCCCCTGTCTATCTGAATTTCA
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CAGCTGAATGCCTGTATTCATGAATCAATGTTTAGAGAGAGACCTCTAGTAATTGGCTGAAGGATTTGGTCTTCACATT
TCCTGTTCACCATTTTCATTGTTAATTTTGAGGGTGGTATTAATGGCATAAGGAGCTAATCCACAGATGAAATAAAAAT
GGCAGGAACCACTAATATGGCTGTTAACAAAATCAGCATACAAAATTACTTGACAGACTAAATGGGAGAGGTAAATATA
ATAAGACAAAATACTAAAATGAAAATATAAAGTCTAAAACACCAGAGGGAAGTAGGAACTAATGTTGTTTGAGGAGCAA

Fig. 9.129

TAGGAGCAAAGGTGAGACATAGTTTAATAACAACTGTAGGTTTAGGTGGTAGTTACAGAAGCATAAATCAATAATATGA
CATTATTCCCCCCAAATATTCATTCATTCTTGGGTTTCATGAATAGAACTGGGTTTAGAATAGAAAAGGTAATGATTTG
GCTGTAAATTTATGTTGCTTCTCCCATAGCTAGAGCTATGACCCCAATCCTGGGCAATTCACTTTAAGAACTTTGAGAA
GTAGTGTACACCTAAAACTTGCAATCCTCATGGAAAGATGAGTCCAAACTGTGTCACGTGAAGAATACCTAAAGCTGTG
GTTCCAAACTTATGGCCTTCAGATGTGTTCTAAATGGCCCATATGGGGTTTTTAGAAATTTGAATTTGCGGCAGATGTT
TCAAAATTAGTAGATGTCTCATTAAATATAGATTTCTGGGATTTACTCTTGCTACTGTGAGGGTGTGTGATCCTGTGTT
TGTGTTCCTCTCAGACCACTTTACTCATTTACTTTAAATTTCTGGTGCCTATAGCAATCGGGGTGCTAACACCCGGGGG
GATAAAAAAGGACTGGGGAATTCATGGCCTGTAAAACAAGGTTGGGGTTGGAGAGATATAAATATATCTGGAGAGCTTT
CATAGGGCAGAGCAATTAGACCCAATCTTTGTGTCCCCAAAATGTTAAACACTGGTATTAATAATAAGAAAACATATTT
CCATTAACCATATAGAATAACTATCTTATAGTGACTTGAGACTGGCTATTTTATTCATCTTTTGTTCATCAGTACCGAG
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ATCATTCCTACGTGATGCAAATATACTTTTATTCCCTGGTATTTGTAATTTAACTTACAAAACACACGTTGCCTTGAGG
TTTGGCATGATTTGTTATTCTATCCTTCAAGAAGACCCATGATAACAAATCAAATCATTGAGAACTGATTTCAGTTTTC
ATTGTTTGGGGTGGTAACTGAAGGTGACGTTTTGAAAAATCATACTATAACTAACCTAGAAAATAATGTTCAGAGGCCA
ACATGTGGCAAAGGAACACATAGTTAAGTATATAGTTTTTAATAGAAATTCTATGCACCTTTTATTGTGAAGGTCTAGC
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AATTTGAGTTCTAGAAATGAATGTATTTAAAATGCAGTCCTGAGGTGCTGTATGCTAACTATGTAAAGCAATAGCTTAT
TAAATTCTTGGAAACTTGCTGTTTATTTGAAATTGGATATGGTAATAGATTTTTGTTAAATGTTATTTTATAAGGGATA
ACATTTTCTCCTGCTTAGTTTCAGGAAAAAAGAAAAGAAGCACTTAATTTTTAAAAGGTTAATGGATACTTAATGGTTG
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TAATATCCTGTATCATCATTATCATCATTATTATGTGTTGAGTATACAAGCGTCTATCTCTGAGGAATACTTAGCAATT
TATGAATTTGTTTTAATTAGTTTTCTCAGCCTTCTCATAGGGCATGGGGGACATATTGCTTAACCCTAGTTTTAGAGCC
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AGCACCTTATTTCTCCTTCTGTAAACTAAAGGAGAAAATTATTATACATTTTTATACTTAAAAATACGTAGTTGAGAAT
TTCAAATATATGCAAAAGTACAGAGAATAGTAATTGGTTGGCGCGAAAGTAATTGTGTTTTTTTGCCATTTAATGGCAA
AAACCACAATTGCTTTCGCCCAACCTAATATAATGCATCTTAAATACTCATCACCCAGTTTTAACAATTCTCGATATAC
AACTAGTTCTTGTTTCATCTGTACCTTTACCCATATTTCCTTCCTCTACAATTATTTTCAAATTCAATACACAATATTT
CTTCATCTGTAAGTCCTTTAGTATGTATCTAAAAATAGTCTTTTAAAAATTACCTCAATAACATTAAGATGCTTGTAAA
TTTTCCTAAAAAAATTTCCTAATAATTTCTTATTATCAAATGTAGCTGATTTTTAAAACAATTTTATTAAATAATTTTAA
TTTTTGGTATGAAATGGTAGCAACTAAGGTTAACAGATCGAAATCATTATGTGTCTGAATTCTCTTTTACACTATAAAT
TTCCTCTTTCTATCCTTTCTCTCTGCACCCTTTTAAAAAAACTGGGTCATACATCTTACAGAGTTTCTCATAGGTTCAA
TTTTGCTGATTGTATCTCTATTGTGTTGTTCAACCTGTCCTTTGAATTTTCTATAATTATTAGTTAAATCTAAAGGCTT
GATAAATGACTAATGTTTTATTATTTTGAGAGGATAAGCATATTTTGTTTTTTGTTTCCCCAGCTTTATTAAGGTATAA
ATAATAAATAAAAATTGTATATATTTGAGGTAGACATGTGATGACTTGATATAGGTATACATTGTRTAATGATTACCAC
AATAAAATTAATCAATGCATCCATCCCTATAAATGGTTACCTTATTCTATGTATGTATGTGTGTGTATATGTGTGTGTG
TGTGTGGTAAGGATTAAGTATTAAGGATACTTAACATTTACTCTCTTAGCAAACTTAAACAATACAGTATTATTATCTA
TTGTCACCAAGCTGCAATATTAAATCCCCATAATGTATTTGTCTTATAACTGAAAGTTAGTATGCTGTGTCCAACATTA
CCCCATTTCTACCATGTCCCAGATTCTGGCAACCACCATTCTACTCTCTGTTCCTATGAGTTCAACTATGTTAGATTAC
ACATATAAGCAAGATCATACAGCATCTGGCTGTCTGTGTCTGGTTTATTTCAGTTAGCATAATGTCCTCCAGGTTTATC
CATGTTTTCTCAAATGGCAGGATTTGTTTTTCTTTTTACTGTTGAATAATATTCCATTGTATATACACCACAGTTTCTC
TATTAATTCATTTGTCAATGGACACTTAGGTTGGTTCCATACCTTGGCTATTGTCAATAATGCTGCAATGAAGACGACA
AGTGCAGACATCTCTTCAGCATGCTCCTTTCATTTCCTTTGGATATATACCCAAACATTAGAGTGCTGGATCATATGGT
ATCTCTATTTTTAATTTTTTGAGGAATCTTCATACTGTTTTCCATAATGGAGTTACCAATTTACGTTTTCACCGCAGTG
CTACAAGCGTTCCCAATTCTCCACATAGTCACCAACACTTTTTATGACCATCCTAATGGGTGTGAGAAGATACCGCATT
GTGGTTTTGATGTACATTTCCCTGGTGATTAATGATGGTGAACACCATTTTATATACCTTTTGGCCATTTGTATGTCAT
CTTTGGAGAAATGTCTATTCAAGTCCCTTGCCTATTTTTAAAATGGGTTATTGGAGTGTTTGCTATTGAGTTGTAGGAT
TTTTTTGTGTATTTTGAACATATCAGGTACACTCAGCCCTTTGTATCTGTGGGTTATGCATCAAGGGATTCAATTATCT
GAGAATCAAAAATATTTGAAAAAACATAATAAAACAATAAAAATAATTAAAAAGTAATATAGTATAATTATTTACATAG
TGTTTACATAGTATTAGTATTATAAATAACATAGAGATGATTTAAAGTATGCAGGAGGATGTATGTAGGTTATATGCAA
ATACTATGCTATTTTATATGCAGGACTTGAGCATCTGAAGATTTTGGTTTCTGCAGAGGGTGGGAAAGGTTGAACCAAT
CCCCCATGGATACCAAGGTAAAACTATGTATGGTTTGCAAATATTTTCTATCATCCATATGTAGAAAATATTTCATTTT
GCTGATTGTTTCCTTTGCTGTGCAAAAGCTTTTAAGTCTGATGTAGTCCCATTTATTTTTTATTTTGTTGCCTACACTT
TTGGTATCATATTAAAATAATAATCACCAAGACCAGTGTCAAGAAGCTTTCCACCTGTTTTCTTCCAGGAGTTTTGTGG
TTTAATGTTTTAATTTCTTTTAAGCACATTTTTGTATTGTATGTAATAAAATATGGATACAATTTCATTCTTTTGCATA

Fig. 9.130

TGAACATCCAGTTTTCCCAGGAACATTTATTGAAGAGACTATTATTTCCCCATTGTATATTATTCATGCCCTTGTCAAA
GACTAACTGATTATATATGCAGGGTTTATTTCTGGGATCTCTATTCTGTTCCATTGTTCTGTGTGTCTGTTTTTATGCC
AGTACCTCACTGTTTTGATTACTATAGCTTTGTAATATAGTTTGGAATTAGGGAGTATGACGCTTCCAACTTTGTTCTT
CTTCTTCTTCTTTTTTTTTTTTTTTTTTTTTAGATGGAGTCTCGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCATGATCT
TGGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGCAATTCTCTGCCTCAGCCTCTCTAGTAGCTGGGATTACAAGCACC
TGCCACCACGTTCGGCTAATTTTTGTATTTTTAGTAGAGATAGGATTTCACCATCTTGGCCAGGCTGGTCTTGAACTCC
TGACCTCATGATCCACCCACCTAGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGTCACCACGCCCAGCCATTCTTCT
TTCTTAGGACTGCTTTGGGTATTCAGGGTCTTTTTTGGTTTCATATGAATTTTACAATGGTTTTCTCTATTTCTGTGAA
AAATTCCATTGAAATTTTGATAAGGATTGCATTTAATATGTAGATCCCATATGGACATTTTAACAATATGAAATCTTTC
AATCCATAAATATGGGATATATTTTCATTTTCATTAATGTCTTTAAGTGTAGAGATCTTTCACCTCCTTGGGTAAATTC
ATTCCTAAGTATTTTGTTCTTTTAGATATTATTAAATGGGATTGTTTTTCTTAATTTATTTTACAGATAGTTTATTGTT
AGTATATAGAAGTGCAACTAGTTGCTGTATGTTGATTTTATATCTTGTAAATTTGCTGAATTATTTTCTTAATTATGAC
AGTTTTTTAGTGAAGTCTTTAGAGTTTTTTTTTAAATATAGAAAATGTCATCTGCAAATCTAATTTGGATGCCTTTTAT
TTCTTTTTCTTGCCTAATTGCTCTGGCTAGGGCTTTCATTACTGTGTKGAACACAAATGGCAAGAGTAAGCATTCTTGT
TTTGTTTCAGATTTTAGAGAAGCAGCTTTCAGTTTTCCACCATTTAGTGTGATGTTAGCTGTGGGCTTCTCAAATATGG
CGTTTATTGTCTTGAGGTTCATTCCTTCTATTCCTAATTTGTTGAGAGTTTTTGTCATGAAAGGATGTTGGATTTTGTC
AAACACTGTTTCTGCCTCTATGGAGATGATTATAGATCATATGATCTTTATCTTTCATTGTGTTCATTCGGTATATTAC
ATTTTTTGATTTGTGTATATTGGATCATACTTGCAAATCTAGGATAAATTCCACTTAATCATGGTGAATTATATTTTTA
ATGTATTGTCAAATTCAGTTTGCTAGTATTTTGTTTAGGACTTTTGCATTTATGTTCACCAGGGATACTGCCCTGTAAT
TTTTTTTCTTATAGGGTCCTTATCTGATTCTGGTCTGTTGGTAATGCTGGCCTCATAAAATGAATTTGGAAGTGTTCCC
TTCTCTTCACTTTTTTTGGAAGAGTTTGAGAAGCATTTGTATTAATTCTTAAAATGCTTGCTACAATTCACCCTTGTTG
CCACATGGTCCTGTGCTTTTCTTTGTTAGGAGTTTTTTTTTTTAATTATGGATTCAATCTTCTTACTTGCTATTGGTCT
GTTGAGGTTCATGTAATATATTTCCCTATCCCTTTGCTTTCAGCCTATGTGTATCCTTAAGGCTTAAGTGAGTCTCTTA
TTGTCCCAATATGAGACAGCATTTTGTTGGATTTTTTTAATTCATTCAGCCACTTTGTGTCTTTTGATTGAATAATTT
AATCCATTTATATCCAAGATTATTATTTATAGGTAAGGAGTTATTACTGCCATTTAAAAAATTGCTTTCTGATGGGTTT
GTGGTTCTTGTGCTTTTTTTTGTTGTTGCTGTCTTGTGATTTGTTGATATTTTGTAGTGGTGTGCTTTGATTCCTTGTT
GTCTTTTCTGGATCTATTAGAGTTTTTTTTTTTTTTTCCTTTGTAATTACTATGGGACTTTCAAAAAACATCTTGTAGC
ATCTTTTAATTATAATATTTTATTTTAAGCTGATGACAAGTTAATTTCAATCACATACAAAAACTCTACACTTTTACTT
TCCCCGTCATTTTGTGCTACTGATGTCATGCTTTGCATCTTTTTGTATTGCATATCCATTAACAAATTACTGTAACTA
TGGTTTATTTTTAATTATTTTACCTTTTAACTTTTATTCTAAATTTAGAAATAATTTATACATCACCATTACCACATGC
AAGTATACAGAATTTAATTATGTATTTACCTTTTCCAGTGAGTTGTATACTTATATATGTATTTATGTTGTTATTTAGC
AGCTTTTCATTCCAACTTGAAGAATCACATTAGTATTTCTTATAAGGCAGGTCTTGTGGTAATGAACATCCTCAGTTTT
TGTTTGTCTGGGAATGTCTTTACCTCTCCATTTCTGAAGGCTAACTTTGCAGGGTACAGTATTCTTATTTGACAGGCTT
TTTTCTTTCAATGTTTTGAATATATTATTCCATATTATTTATTTGTTATCCATGTAGGCTTGCATTGGTGTCTGTGAAT
TTGAAGAAGCAAACAGTCTTTCGGTCTTTACAGGCTGATTTTAACAACCTTCTCTTCCACCAATGGCAGACCTGTTATT
AGGTATGCAGATAGGCGTGGTTCCCTCTGGGTTTCTGGAGGACTCCCCCTGGCTCTCTGAGTATGTCTATGGGTAGGGA
GAACCGTCCCCAGATCAACATGAGAGAGCTTGGAACTAAGTCACTGCTGCTTCAGGGTCCACATCTGAGAGGACTTGCC
TCCAGGGAGTTGGATGGGCATACATCTCTGGGGACAAGATTGACCTTGGGCCAAGTCTAAGTGGGAATGGAGCAAAGTT
ATAGGGCCATCTCAGAATCTGCTGTGGAACCAAGTTTGGCAAGCCTGTCTCCGAGAACATGGATGGGAATGAGTCCTGA
CAGGTCGCTAAGTGGAGACAGGACTGCTCTCAGGCCACAGTTTCAGTTTTAGGATATCATAGTTAGCAGACAGCTCTAT
ACAAAACTCTACTCCTTTATATCTCTGCCCATTTATGTTATCAATGTCACATATTACAGCTTTTTATATTTTGCATTTG
TTAACATAGTTTTATATTTATATTTTATAATTAAGTTCTATACCAGAGTTAAAAATAATTTATGCACCACCATTGCAAT
ATTATACGATTTTTATTTGTCTAAATATTTACCTTTTCCTTTGTGTTGCTGTCTAGCATACTTTGTCTCAACTCAAAGG
ACTCCTTTTAGCAATTCTTGTAAGTCAAGTCTAGTGCTAAAGAACTACCTTAGCCATTGTTTATCTTTATTTCTCCTCC
ATTTTCAAAATACAGTTTTGCCAGAAAGAGTATGCTTGGTTGACAGACTTTTTCTTTCAGCACTTTGAATATATTGTCC
CACTCCCTTCTGGCCTATAATGTTTCTCCTGAGAAATCTGCTAATGTCATTGAAGGTCGCTTGCACATGATGAGCCATT
TTCTCTTCCTGCTTTCAGGATTCCCTTTTTGTCTTTGATATTTGACAGTTTGATTATAATTTATGTTGGTATGTTGGTT
TTTCCACGTTTGAGTTTTATCAGTGTCTTGAATTTGGTTGTTCATTTCCTTCCTCAGATTTGGCAAGTATCTAGCCATT
GTTTTTTTCAAATAAGCTTTCTGTCCTTCTCTCTTTCTATCATCTCCTTCTCAGATTTGCATTATGTGTATGTTGGAAC
ACTTGATGGTGTCCCATATGTTTCTTAGTCTTTCTTCACTTTTCTTCATTCTTCTTTTTTTCCTCTTTGTATCTCTGGC
TTCATAATTTTAAGTGGCCTCTCTTTGAGTTCATTTATTCTTTCTTCTGCTTGATGGAGTCATCTGTTGAAATGCTCTA
GTGAACTTTTCAACTCAATTACTGTATTCATCTCCATGAATGTTTGTTTTCTTTTTGAAGTTTGTTGATATTCTCATTT
TGTTCCTGCATCATTTTCCTAATTTCATTTAGTTTTCTGTCTGTGCTCTCTTCTAGCACATTGAACTTCTTTAATATTA
TTTTTAATTATTTGCCAAGTAACATAAATTTTTATTTCTTTCTGGTTGGTACCTGGAGGTGTATTTTGTTCCTTTGATT
GTGTCATGTTTCCCTGTTTCTTTGTGTGCCTAGTTATTTTTTTCTGTGATTTGTGCATTTGAAAAAGCAGCCACCTCTT
CAGTCCTTATAAATTGGCTTCATACAGGGGAAGACTTTTACCAATTAGCCCACATAGAGATTTTGGGAGCCTCTCCAGT
TTTGTTTTGTTTTTTTTTTTTTTTTTTACCACGGGATACATCTTCTTTGAATTTGTGTGTGTTCTTTCCCAGTTAGAGTGAT
TTGCTTCTTTTTCTTCCAAGAGCTTTTAATCTCCTTCTCCGTCTGGTGTCTGTCTGTACCACTGCAGGTTCTGTGGCAT
TGCAATAAGCCACTGAGTTACCTTTTGCTCTCTGCAGACCCCAGGCATCCAAAGTATGTAGATTCCATTAGTGCTCTGA
ATCAGGCAAGACAGAAACCAGTCTCTCAGACAACACTCTGAAAAACCAGAACATTGGACATACATTCCACTCTTCTCTT
TCTCTCCTAAGGGAGAAGTCATAAGGTGTGATTTATTTTTCCTGATGACACCAAGCTGTGCTGGCTTGGAGGAAGGGCT

Fig. 9.131

GTCATGGTTGACGTGAAATGCCTTTTCTCATCTGTTTCAATGAGACTATTATTTTCTTTAAGTTTGCCTCAGGCACTGC
AACTTCTTGACTGGTTTCTAGACTTTTCATAAAACTTTTTGGATCATATATTATTGCTAAGTTGGCGTCTCTGGTGGAG
AATTAGCTCTCTCGCTGATGAAACTCTACAGAATACTTTTACAGTATTTAATATTGCTCTTATTTCATCTCACACGTAC
ATAGTCACTTTCCTAACACTTATATAATTGTTCTCTTCCCAATAGCTAGTAGTGTTTCCTGTAACACATATTGACACAT
ACTAAGTTCTTATATAAGAAAATATTTAAGGGAATTTTGTATTTTTCCACTAAACTTTCTGTTGATTATTTGAAGGTAC
CACACTTTTGGTTGTTATTGTGGCTTCATGGTAAAATTTTATATGTATTAGAGCAAGACCGTAACCATGTTATATTTTA
TAACATGGCCTAATTCCTCCAAAAAGTAAAATAAAAAACTAAAAAAGAGATGATTTTCTTGCAATAACATTAAACTTAG
AAAATTATTCAAAGGAACATCAGTCTTGATTATATAAGTCTTGGAAAAGTTGTATAGATTTCTTAATCTAAGTTCTACT
TATTTCTTTCTGAGCTTATTTTTAAACATTTTGGTTTTGTTTGTTTTTATAAATGAGATGTTGGTGTGGTAATTTTAAC
AACTGGTCTTTGATTTTATAAATAAAAGCCTTTTGCATATTTTACTTTAAAACTGGACAAACTTACCTGACTATTCTTA
TTTTCAATTATTTTTCAGTTGATTTTTCTGGGTTTCCTACATTAAACTAGGTTGTAATCAAATAAGGATAAAGTTGCCT
TCACTTTTCTTATAGTTTTATGCCTCCTATTTCTATTCCTCACATTGGGTTACTGAATTTGTTAGAGGTTTTTGAAAAA
TGGGGGCAATGTTACATTTGGGCTAAAACTATGAACATTGATATCAGCTAAACCTGGTCTCAAAACTCTGAAGGATCCT
CAGTTAGAACTGAGAGGTCTTAAAAGACGAGGTGGCTAGAGGGAGGTCTGCACACACATTGCCATGAGTCCTCAGACCA
CATGAGACATTCTTTTTTGTCTGAAGCAAGGCTGGAGCCAGGCCTAGATGGCCTGTGGAAAGCTCCCATGGAACCAGCC
TGCTGTTCTCATTCCAGGCAAACTAACCTCTGTACAGTTGATAGTGTCACTATGGACAAACTAACCTGTTTAAGCTTCA
TTTCCAAATCTGTATCATGGGAATAGTAACAGTTTTTTGTACAGTTTTTATAAGAATCAAGTAGCTACCTATACAATAT
ATGTAATACAATAAATATTACTAAGTTTCTATTATTATCCTGATCTTAAGCATGAACCTATGCTTTACCAGTAGCTATA
ATGTTAAATATAAGTTTAATATAAACATTCTTTTGATCCATAGTTTGTTTATCAAGGGGATATTTTGTAGTTATCTGAA
TATCAAAGCCAAAAGCAAAGCAACATTTCTGGCTCTCTGCATGTGGAAAGGGAACTTAGCTTTACTTTGTCTCCCCTTT
CCTCCCACAGCCCAATATTTGTTAGTTTATTCTAGATTTACATACCCAGTTTATCATTATAAATATATCATCACTTAAA
TGATGGTTTTAGGTTTTTCTTTCATGTTTATACACATAGTTTTGATTGGTATTGGTATTTAAATAAAACTTGAGAATGA
AGACAATAGATCCTTTGTATTTCTTTTAAGGTTGTGATTTGACCCCTGGTTCCTCAAGTGAGAAACTTTTCAAAACACT
TGAGAGAGTAAACTGGCTGAGTTTTACCTATACTTACTGTAAGACATAATTTTTAGCTGCTAAAAAAACAATGTTAGTT
TCTTTTCTACACTTGGGATTCTATTACTGTATGTAACTGTGAAGGAAATAATTGACAGAACTCATGTTTTTCCTTATTT
TTTTTCCTTCCTCTACTAACAAAATAGAATTGACTTTATTTTTTAAAGTCAGCCAGGAAATGTACAATGCTATTTACAA
AAGGTTAATTGAATCCTAGAGTTGCAGATCGAGTTTCTTGTTGATGAGAATATACAGTAGAATATTACTGAATGAGAGA
TTTTTCTATTCCTTTTTTGGAAACTTTTTGGAAGTTTTGATGACTGAGTTATAGGAAATTGGCTTTAGAAGGACTTCAG
TGATTTCTGTCTCTTCTAATCAGTATGAAATCACAGCCTATATTTGGATTATGCTCTGTGAATGTTTGAAACCTATCTG
TTATCTTTGTGTTAACCTGAGGTAGAAATTTTCATTTTTATATAGAATTAGTTTTGCAAGAGTATCTTTTCTATATACA
AATATCCATTTGAAAATTGATTGTGTTAAGTCGATACAATGCCCTTTTCTATATTAAAGGACAGGATGTTTATTGCCTT
GACTTGTTTGTTTCCTGTAAAGTTATTTGGGCAATAATAGCATTCAGTTTTAAGATAAAACATACATAATAAGTAATGA
GACAAGAGGAAAAACATTTGGCATAAGGCTTAGAGAAATTTAAGGCTCATTTTCCATTATTGCTTTAGTGCATTATTAA
CAATTTCATGGGGACATGAAAGACTAATATATGGAGAAAATGTCTGCTATTGGCATATAATATGTTAAGATTGCAAATA
TGACTTTTAATCCACTGTGATAATAGCCTATTAAATTGTATCCTAGTCCTTGAAGAGTCACTAACATTATCTTGTTTAT
ACTACAAAATTAGGTACAGGGAAACTTTACTTTTACAGAACTTAATGTTGCATCAAACTAACTGGACAGGAAAAAAAAG
GAATGTGGCATTGGAAGTGATAAAACAAAACACATCCTCTGCCTATGACTGTCTTCTTCCTGGACCTATCTGACTATTT
AACATGCTGACCTTTACAATGCTCTGCATAGTGTAGGCTCACTGAAAGCACTGAGTGTCTGAAATCCTTCATTCTTATT
TAAAACAAAATAGGTGAAAATACTTAATCATGATGTCTATATATTTGAAAGAATATTTGAACATGGGGAGAGACCCAAC
CAGTTTGAGTGGCTGAAGTTTTGGAATTTTTATAGAAATTCCCTATTATGTGTTTCAACTTTATGCCTGACTTATAATA
ATAGTTACAAATACTACATTGCTAGTAACACCAATATCTAATACCATTTCCTCTTTCCTAATTTCTTGCAGTTGAAGAA
ATGGAGATGAGTATGTCTATATGCTTCACTCTTTCCTCAGCAAGATTTATTTAGCATATGTTTTGTTCCAGGCACTGGC
TAAGTGCTAGGGGTACAAAAGTTGTTTTGTCTCCCTTCCTTCCAGATGTGTCCATGTGTCCAGGCTAACAGAGTGAGTA
GTCACACAGGCAAATCATTCTCCTACAGTTGTCAGGCTGAAGGCTGACTTGGTGTCATAAATAAAAAGGCAGAAGATAT
TTGTATTCATTGTCTTGGATGATATTTTCAACTTGAGTAGGCAGATTGAAAAGAAAAATGCGGCCGGGTGCAGTGGCTC
ACACCTGTAATCCCAGCACTTTGGGAGGCCGAGGCGGTGGATCACCTGAGGTCAAGAGTTTGAGACCAGCCTGGCCAAC
ATGATGAAACTCCGTCTCTACTAAAAATACAAAAAATTAGCTGGGTGTGGTGGCAGGTGCCTGTAATCCCAGCTACTTG
GGAGGCTGAGGCAGAAGAATCACTTGAACTTGGAAGGCGAGGGTTGCAGTGAGCTGAGATCATGCCATTGCAATCCAGC
CTGGGCAACAAGAGCAAAACTCCATCTCAAAAAAAAAAAAAAAGAAAGAAAGAAAGAAAAGAAAAGAGAAATGGTTGAAG
GATAGCAGCTTGGACAATGCCTAGGTTTTAAAGACAGTTAATTGAGGAGCCAGCAATGAGACTAAATGAAAATGACTGG
AGAAGCAGATAGACAGAAAGCAAAAATAAATGTCCAATTTATGGGGTGATCTACATCTTTTTTTGTCTGCAACAGTCCA
GGTGTTCTCTTTTTGTCGATGTCACAACTGGCTAGCACTTTCTTTCAACTTGCAAAAGTGTTATGTACTCCAGTAAACC
CTAAGTTCTCTGTTACAGCTTTGATCATATACTGGTGATTATCTGTCTATTATATTTTTCCTCAAATGAACTGTAAGTG
CTTAAGCAAAAGGAGGTGCCTAATTCATCTCTGCATTTTCAGTACCCGACACAAGCATCAAAGGTAGTAGGTGCTCAAT
AAATGATTAATTGGGAAATTAATAGGAATGGAAACACAATTAAGATAGGTTGAACTCCTTTAGAGATATACACATAAAA
TAGTACTACCTGTAACAAGAAAATGCTAAATTTTTGTGGATTACCCCAACAGAAGATTATCTGTGGCTCGTGTACCCCA
AATTAAGTGTTTCTGATTGGCAAGTGTCTCTCATGTAAATAATGATTAAGAAACCATGGCTTCTTCCATCTTGTGACTC
TACCATCTTCAACACATGGTGAGGGGCTACAGAGGGGAAGAGAAATAGGGGGTTGTACTCACAAAATTTTTATGTGGCA
GGCCTGAAAGTGGCACATACACAGACCCATACACATTTCCTTAACTTATAATCAATGAGCATGTAATGTAACACTCACT
GACATCTCTATAGCTACCTGTAAGGGAGTCTGGAGATGTGGTCTCACTGCATGCCAAGAAAGAACATTCTTTCCTGCA
ATGCCTATATATGTATATGTATAAATATATATATGTATATACATGTTTACATATGTATGTATATATATATGTGTGTATA

Fig. 9.132

CATATACTGTATGTGTGTATATGTATATATACACACACACACACATCTTAAGGGGATTTTCTTATAGAAATTTTATTTC
TCCCCCCTCTCTATATATATATGAAATAAATATCAGAGACTGTGAGATTATTAAGAACCACAGAAATTTATTTAACCCT
AGTAATGTGCATGCCTGTGTTTTAAAGGCCATTAAGTAGTTTATTGTCTACTTTTGAAAGAAAAAAAATTAAACAAAGA
AATTAATTAAATATCTTGGATAAAAACTGAAACAAACAAAAAGGAAAATAATAATAATAAATTTAACATTCATCCATTG
TAAGTGTCAATTATTATGGAATTGCTTACTTTAGGCATGTATTTCAGAAAGAATTTTATGCAGTAAAAAGCATAACATT
AAAGTTATTTGTCTGTCAATTATTCCATATAAGTTGGCTAATTTTTGAATATAATTTTATTTTACTACAAGGTAGCAGG
TTCATATTACAGTTATTTCAATATGTGAGCATTTCTTTTATTTTGATATTGCATATCTTGAAGCCGAATATATTTCTAA
GTCCCATCAATAGCAAGGTGAATGTTGTATCATTTTATTATTATGACTTTTATTATACTTTTAAAATTGAAAAACAAGA
CATCTTTATTATAGGGAATACAGAAGCTCATAATTAATAAAGATACTAAAACAAAATTATTACCAATATTGCACAGGAG
AGCCATTTTAGAGAATTAGGATACATCCTTAAACAATTGTTTTATGAATATAATATGTGACTTTTTTGTTTTGTTTTGA
TATTATTGTTTTATAAAAATGGGAGCACTCTATAATCTGTTCTTCCCACTCAACATTGTGTCATTAACATGATTACGTA
TTCTTCTACATTATTTTAACAGCCTCATAGTATTTCATCATATGATGTATCAACATTTACTAAGCCAATCCTTCAGTAC
AGCAATTAGATTACATCCAGTTATTTGCTATTATAAATGAGCTGCAGTGAACATCTTTGTGCCTGGATATTTGCCAAAC
AGTTTTATTAAACTATGTCTAAAATGTCAAAACCATTAGTTCTCAAACTTTAATATGCACTGGAATGATACTGGTGACT
TATTCAGACTCATAAGCCCTACTCATAGAGATTGTGTTTAGGAAGATCTGGAATAAGACCCGGGAGTCTGAATTTTAGC
AAGCACCATCTATGATTCTAATGCAGAGGGTTTGAATGTCACATTTTGAGAAATAATGACTTGGAGACATTAGAAATAC
TATCTTTTTTCCATCTTCTCCCTGCCATAATGCCATTTCTAACAATAACATAAGATACTTATTGCTCTGGTGATTAGT
TTTACATCTCTCTCCAAAATAAAGGCATTTAACCTCTTACCTTCTACCTGATAAGGTTGTTCTTTTTATTTCTGAACCA
TAACTGATACACATTGATCTAGAGTGTGAAAAAAGCCTCTTATACTGTTTTGGAATGGAAAATGTTAGAATATAGCCCT
CTAGTGCTTTATCATTTTTATTGTAAAGATAAAAGTATTTATAGAAAGTGGGTTTAAACTAACAGAGTATAAGCATGAG
TGTAAACTTCATTTTTAGTAGAGATAATTATCTCAAAAAAGTTACGTCTTGAGGCAGTTTTATCTAAAAAAGAATGTCA
AAAACATTAAGTCATTCAACAGATAACCTCAGTTATATAAAGCATTTTTGCAATTGCAATGCTAACACCCAGAGTAGGC
AGCTAAATGCTTATAAAAAGATGTTAACTTTGGCCAGCTATATTTAGTGCTACTGAAGCTTTGCTAGACTCATCCTTTG
TTCTTCTTTTCTATGTTCATCCAGAAGAAGAGTATTTACACATGTATTAGTCAGGGTTCTCTAGAGGGACAGAACTAAT
AGGATACATGTATATGTGAAAGGGAGTTTGTTAAGGAGTATTGACTCACACGATCACAAGGTGAAGTCCCACAATAGGC
GGTCTGTAAGCTGAGGAGCAAGGAAGCCAATTCGAGTCCCAAAACTTCAAAAGTAAGTAAAGTGGCAGTGCAAGGATCC
AAAAACCCATCACTCTGTAGAAGCATGTTGTAACATTTGATGATTCTATAATTCTCATCACACTCAAAAGTAGGAAAGC
TGTTTTCAGTCTGTGGCTCAAGGCCCAAGAGTCCCTGGAAAACCACTTGTGTAGGTCCAAGAGTCCACCTGTTTAAGAA
CAGGAGTCTGATGATCGAGAGCAGGAAACATCCAGCACAGAAGAAAGATGCAGGCCAGAAGACTCCGGCATTCCAGTCC
TTCCATGTTTCTCTGCCTGCTTTTAACCCAGCTGTGCTTGCAGCTGATTAGATGGTGCCTACCCACATGGAGGGTGGGT
CTGACTCTCCCTGTACACTGACTGAAATGTTAATCTTCTTTGGTAACACCCCTCACAGACACACCCAGGAACAATACTTT
GTATCCTTCAATCCAATCAAGTTGACACTCAGTATTAACCATCACAACACATAAGTCATTAACTTAATCATGACCTGTT
TCCAATCCAGGAATGAAGTTCTGTTCTTAGAGGAACTTCCTAAGTACATAAGTACACAGAGGCTCACTTTCCCAATCTA
AAAGCTAAGACTGTTCCAAGTGCATATGCTTTCTGTTTTTTTCTATATTTGTTATCTCACAGAAACATTGATTTGCCAT
TGGTTCTTGCAAAATCAGTATTTTATAACTGGAGGTGGTGTTAAGGTTTATTTTGTATAACCTTTTGATTTTATCCCTA
TGGAGACTAAAGACCAGCAAGGTTAAGACCAGCAGATCTGGAACAGGTTATTATAGAAATTTGTATATTATGTTGTTGC
TAGCAAATGGAATTATTGCAAGGAGATGATGGAAAAGATAGTATTTCTGATATCTCCAAGCCATTGTTTTTCAAAATGT
GTTGTTCAAACCCTCCGCATTGGGATCAGAGGTGGTGCATACTAAAATTCAGACTCCCAGGTCCTATTCCAGATCTGCT
GGTCTTAGCCTTGCTTGTCTTTAGTCTCTGCAGACAAAAAATCAAGACATTATACAAAATAAACCTTAAGACCCCTTCC
AGTTATGAAGTACTCTGATTTTGTAACAACCAATGGCACCTCTTAAGACCACCTGAGTAATTACTGGCAGAGCAGGGGA
TAAAATTTCTATCCTCTCATTTAATGACAGATTGTCATTCATTTCTAATGTTTATGTAGGGCTGCTCTCATCTCAGTTC
TGTTTAATTTTTCAAATGAAAATGTGAAGCTTATTGAGTTATGATCAATTAGTGTGTGTTCTGTTATTTTCTACTAATA
CTCACTCTGCCAGTGACTATACTTGTTAAGGTAGTGCAGCATGGTGGCTTTTAGCTCCAGTTTTAACTAGAAGAGATTT
GGGTTTGGATCCTGACATGTAGGGTGATCAATCATCCTGGTTTCCTTGGGACTGTGGGGTTTCCCTGGACATAGGACTT
TGAGTGCTAAAATCAAAAGGTCCCAGGCGAAGTAAGATGATTAATCACCCCACTAGCCATGTGGCTCTGTCATGATAGG
TCTCTGGGTTTTTTAATGGGTAAAATTGGAAAAGCAAGAAGAAGTAACTCATAGGATTTTAGTAAAAATTAAATGAGAC
AGTATATGTAAAACACGGCACTACTTAATAAAGACTCAGTAAGTATTAGTCATTATTATTGATGTTTTATAAAGCAAGT
AGATTCCTCAAAGCACAGATTCTCAGAATTTAGGATTTGAAATAAATGAACTTTCTTTTTAGCTTTGACCTCTTTTTTT
TTGTTTGTTTTTAAATCTTCTCAGTACCCTTCTGTCGTCTTGTCTATACAACTGGACAATACAACCCAAGGTTGGATA
GAGTCCACCATCTCACATCCTTTTACCTTTTTTCAAGATATAAATCAGGAAGACAAAAATTTTCTATTTGGGAATCAAT
GTGAAGAGTGAGCATCAAAGACAGCATAGAGCTATGGAGAAAGGGGAAATTAGCCTGGATTATAATAACAGCTGCCATT
TTGTTGAGTGCAAACTCTTTGCCAGATATTGGTGCTTCAAATACTTTATATATTTGGTCCACACAATGACTCCGAGAGG
TAAATATTATTATCTCAGTCTTCAGATGGAGAAACAACCTCAATGAGCCTAAGTGACTTGCCCAAAGATAGTTGTATAG
TAAGGAGTGTAATAAATGAGGTCTGGATGTTCCAAGCTCGATGAATGTCCAACTTTCAGCCAGCTGGTTAATTTTGAGA
AATATAAACTTCTTCACCTGTAAAACTCAGAAGGGAAGGAAATTGCCATATATGAGTGCTAATCCCAATGCAAGTAATG
AACTATGCACATCATATGCATGATCTCATTTAATTCTTGTATGTAAATATTAGTCCCATTTTTATAATAAAGAAACAGA
AGCCTTAGAGAGACTAAGCAACACACTATCAATACAAATAGTAAAGTGGCAGTGCAAAGATTCAAAAACCCAACACTCT
ATAGAAGCATGTTATAACATTTGGTGATTCTATAATTCTCAGTATGTGGATATAATAAATATTGCTAGAGTAGACTTTC
CAGCCATTTGGAAATAATTATTGCTCATGTGATAGTATATTTTTCTCAACTAGAATCAAAATATTAACTTTTGACCTGG
GTTTACCTTTGCATGTGGATAACATGGATCAAATTTGCAAAATTCTGCTGAGCTGTGACTTAAATACAGTTCTACTGGG
TCCTCAAGTTTCTTTTAAAGTCTTTTTTTTCTTACTACCCTCTCAGTCTTATAAAAATTGGCAAGAGTATATCTGAGTA

Fig. 9.133

AATGTGACATATGAAAACATATGTTTCAAATATGGCCTTAAATATGCAGAAAAAATAGGACTTTTCTTCCTCTCTCTTC
ATGGGCATGCATGTAAGAAAGATATATATAAATATACAGTCATGTGCTATATAACATTTTAGTCAACTATGGACCATAC
ATACCATGGTGGCCATAAGATTATAATACTGTATTTTTACTGTATCTTTCCTATGTTTAGATATACTTAGATACACAAA
TATTTCCCATTGTGTTATAATTGCCTACAGTATTTATTACAGTAACAATGTACCATCTAGGTTTGTTTAAATACACTGT
GATGTTCACACAAGGAAATTTCCTAATGATGCATTTCTCAGAATGGATCATTATCAAGTGATGCATAACTGTATGTGTG
TGTGTGTATATATATATATATATATATATATATATATGACACATGCATATGTCAATGTATATATTTAATGATGTTTGCAAT
TCATTTCATAGAAGTTATAAAAACATTTTGATTTATCCTTGATTTTATAGAATTCACACACAAAGCTAATAAATTCTAA
GATTACTGAAGATGTTAGTTAACTGTTTTAACCAAGCCACACCTGGTGAACAAATTTGCTATTTTAAAAATAAATTTAG
ATTTTAGTTAATCAAATATTGTTCAGTTAATGTCACTGTTTTCTAGATAGCATTTTTCATGTATACATTTTACTTAATT
TCTTTCCCAGGAAAGTATTAAGCCATTATGTAATGATAAACAGTGTGATTTTTGTTGATTATATGTACTTTCTTGAATT
ATTACCTCAGGCCTCTGAGGAAACACTACATTCCAGTAATGAAGAGGAAGACCCTTTCCGCGGAATGGAACCCTATCTT
GTCCGGAGACTTTCATGTCGCAATATTCAGCTTCCCCCTCTCGCCTTCAGACAGTTGGAACAAGCTGACTTGAAAAGTG
AATCAGAGAACATTCAACGACCAACCAGCCTCCCCCTGAAGATTCTGCCGCTGATTGCTATCACTTCTGCAGAATCCAG
TGGGTGAGTGCCCTCAGATGTCATTTCCCCATTTTATATTTAGATGGTGATTGTTGTCTGTGGTCTTTTGAGTTTTTG
TGGCTCATTGCTTGATTTGAGTGGGAGAACAATGGGGTTTCTAGAGTCAAAAAAAAAAGGATGAATTTCTCAGGTGACA
TTTCTATATCTGCAGGAGAAGACATTTTAGTGAAATTGTTTTACATGGAAGAGCTGAAAATGTATTGGTGAATGCTAAT
AAACATTTGCCAAAGGGCAGTTGTACTTGGAAAATTAATATTGGCCATATGTGACTTGATAGAAGACATTTTAACAAAT
GAGAACTAATGGACAAATTACCATGTAGTGATACATGTCTAGAAACAATAGGAAATGTTCACTGATGCAAAATGAATTT
GGAATCAAGAATAAATTGTATTGTAATTAGAATCAAAAGAAATATGCAATGGTATTCATGAGTCTAAAAATTTTGCCTT
TGACATTTTGAGGTATTGCTTACCAGAATACTATTTCAGCTCCCAGTATAAGGTGATTTTATTTAGCATTAGTACTTAT
AGAGGAGTCAGCCACAGCCACGTCTCCATCATGTAACATTTTTATTTCCTACTTTGCAGGGTATAATTTTTGTTTTTAT
TCTTTTTCGTGTTGTTTACCAATGGAGTTTTACACTTTAAAGCAATGTCACCAGTTTAAAAATTGTGAAAGAAAGTAAG
GATATTGGGCACATCAATTATTTGTTCTTGTGACCAGCTGCATTTTTAAGAAGCCTGGATAGAAAGGAAAGAGGATGAA
GCCAGTGGGCCATACATAGATAGACTCTTGAACATTTGCTAAAACTACAAGAACAAAACAATTACTATGCTACAAATGT
GATGGTCCCACATTCTCTGCCAAGTTAAAGGCATCTCTGGGGAAAATGTCTTTTGGATCTTGTTAAAGTTAGGAAGGTT
GTGCTCAGAGGAAATTTGGCTAGTAACTCAACTCAAAGATACTGAATTTAGCTGTTTTACTTGTTATTGACCAGTCTAA
GGGACCTGTGTTAGAAAAAGGTATGAGGAAAATACTACTAGATAAATAATAAGAAAACAAATATTCACCTTGAAGCAAT
GAAAAGAGGAAATATATATTTGTTTCTGTTGTTGTAATTGAACTATGTGTTTAAAGAAGAATGCACACACATTGATCAGA
CTCATACTAAAGCAGATGGGAATTTTATATGACAGCTTGACCTGAACATTTTTTGAAAAATGCTGTTCCCCTGAAACTA
TTTCTCCTTTCTTTGGAAATAACATTGCTGCCGTTCATTCTGTGTAGAAGAGATTCACAGATATCAGGTGTATCCAGGG
ATCCCAAGATCACCCTCGGGTTCAATGATTTGCTAGCAGAGCTCTCATAATTCAGCAAATAGTCATATTCATGGCTCTG
ATGTGTTATAGCAAAAGGATTCAATGCAAAATAAGCAAAGGGAAAGGTAGATGGAACAAAATCTGGAGGAAACCAAACA
TAAGCTTCCAAGAGTCCCCAAGTGAAGTAAGACAAGATACACTTAATTCCTCCAGTAATGAGTTGAGACAACACTTGTG
AAATGTGTTCACCAGGGATGCCTTTACCAGGGAAGCCTATTAAAGACTCAGTACCTAGAGTTTTTACTGGAGGCCAGTC
ACTTAGGTACCCTCTGCCTAGGATATACAAACTTCCAGATTTCCAGAAGGAAAGTGGATATGCAGCATAAACCACATTA
TTTGCACAGACAGTTTAGGCAAATTGAGCCAGTCTTACCATTTAGAGAATGGTGGATCACTCCTGAAAGTCAGGTCTGC
TAAAGGCCAATGTTTCAAACAGGTCTTCCTATATTTAATTGACACAGTCCTGATTAACTGTTTACTACACACCAGGTTA
TCTTAGAATAGTTATCTTACTTTCTTCACACTTGTGGAAGAAGAGATTATAATTAAAATTAAAATGCACTAATTTAAAG
CCCTGATATATTCAATTAGCTTTGGTATCTCAAAAATTTTGGTTGCTAACCATGATTTCTCATTTTGAGTTGGTGTTAT
ATCATGTGCCCTTAAAATAAAATGATGCAATATACCTAATATATCTCTATGTAGTTGGATATTGTGTGTAATCTAAAAT
CTTGAGCTGGGCGCAGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGGATTGATTGACCTCATGAA
TTTGAGGCAAGCCTGGGCAACATGGCAAGACCTTGTCTCTATCAAAAACACAAATAAATAACTGGGTGTAGTGGCATGC
GCCTGTGGTCCCAGCTACTCAGCAGGCTGATGCAGGAGGATCGCTTCAGCCTGCTTGAAGGCAGAGGTTGCAGTGAGTC
AAGATCCTGCCACTGCACCCTGGCCTGGGTGTCAGAGAGAGAATGTATTGCTAAAAACAGTTTCCAAGTGCCAAGGAAC
TTCAGGGTTCCGAATTGTCTATGTCCCAGCATTTCTGTTGATTCACATTCATTTCCATCTTCATTAAGATTTAAGAATC
AAGTACAATTGACCCTTGAACAATACAGGTTTGAACTGCACAGGTTCCTTTATATGAGGATTCTTTTCAACCAAACACA
AATGGAAAATATAGTATTCCTGGGATGTGAAACTCATGTATACAGATGGGCTGACTTTTCATATATGTGGGTTCCACAG
GGCCAATTGCAAGAATTGAGTATGCATGAATTTTGGTACATGTGGTAGACCCGAAACCAATCCCCTACATATACCAAGG
AATGACTATGTAAGCAATGTCATGCTTACTATTTACAAATTTATCCAATATTATGAAGAAAATAATTTTTCTTTTTGAA
AGATGGAACAAGGGTTTCATTTCAAAAGAAACAATAGACAATAATGGCCAATCAACAAGAACCAAACTAAGTAGATATT
AAAGGTATTGTTATTACATTTGGAAGCCAGAACAATTTGCGAATTGAATATTGAGGACTAGAAAATTCAGGAGTATAAC
TTTCTGGAATGTCGAAGCTTTGGAGGAGAAGTAGAAGGTAAAGTGCGGGGCCAGGTGCAGTGGCTCACGCCTGTAATCC
CAGCACTTTGGGAGGCTGAGGCGGGCAGATCACAAGGTGAGGAGATCAAGACCATCCTGGCTAACACGGTGAAACCCAG
TCTGTACGAAAAATACAAAAAAAAATTAGCCGGGCTTGGCAGTGTGTGCCTGCAGTCCCAGCTACTCAGGAGGCTGAGG
CAAGAGGATGGCGTGAACCCGGGAGGCAGAGGTTGCAGTGAGCCGAGATTACGCCACTGCACTCCAGCCTGGGCGACAG
AGTGAGACTCTGTCTCAAAATAAAAAACAAAAAACAAAAAACAAAAAACGAAAGGTGAAGTTCGGGCTTATATTCTGTA
GCCATTTTAGTTAACCAGGAGCCCCAGATTCCTTTACAGCTGTCAGAAAGAGCTAATGGGAAATTTAGCCTATTTTAAC
TGAGTTGTCTCCAGCCCATTGCCTCATTATTAAAGGTTAGTATGCCTTTAAGTCCCATTGCCAACCTATACTGAGACCA
TACCTTAGCAATTGCAAATCTTTGATGGTCAAGGCGACTTTTCATGCCCTCCAGATTTATTTCCTTTCTTTCTTAACA
TCATAGCCTTTTGCTCTTTCTTCTGGCATATCAGTATGCCAGATACTTTCTTTGTCAAGTGTCAGGCAGTGGGTCTAGA
GACTTGTACCACCCCTTTAGAAAGCCACAGTATGGCCCTGAGAATCATTAGTTTCTGAAAAAGAACTTTGATGTGCAGA

Fig. 9.134

AATAAGTGTCGTAGATGACAGCTATTAGCTTCCTCATGAAGTACTTGGGTCAAGAGACTGAGTTCAAAAGGACTTTTAG
TTATTCACACTTCCATATTTCTACTTTGACTTTTTTTCCCAAGCAATGCGAATGTGTTCAAATGTACACTTTTTAACAA
TTTCTTTTGAGTATGCCCAAACTGTTAGGTTGTGTGTATGCTGTGATTTAGCAAACTTAAGAAACTGTAAATGAACAGA
AAACAGAATTATTAAGACCTGGGATGCCTATAACCCTGAATTCATCTGCCAGTTAACTTTCTGTACAGGGTAGGCGAAT
TCAGGCTTCATGGCTGTTTACTGACCTTCCTCGAAGTAAGAGAGACAGCTATTAATGACTTGAAATGTTATGAACGTGG
CATAGAAGTAATTTGGAAAGTCAGTTTTTCATATTTTCCTCCTAAATAATTTTCTATTACCTTTCATAAAATCTTTTTA
TTAAGGTATAATTTACATGCATTATACATCTTGAATTAATATGTATTTATACTGTCATGTAATCACCATCCTATTTCTC
AACTGATCACTAAAGGTTATTTTGCCTCCTCTTGGACTTCACATAAATGGAATTGTACTGTATGTACTTGTTGTGTCTG
GCTTCTATTAGTCAAAATTTTTTTTTGATATCCATGTTTGTGTATATCTCAGCAGCTTGTTTTTATTGCATAAATATAG
CATAATGTATTTATTTTTACTCTCTTACTAATGAACCTTTGGGTTGTTTCTAGTTTGAGGGGATTATGAATGAAGCTGC
TATGTACACTTATACCAGTCTTTTTGTGAATATATGCACTCATTTCTTTTGGGTATATTCCCAGGAGTAGCATTTCTGA
GTCATAAGGAGGCAAATATTTTATTTTCATTACTGCCCAACAGTTTTCTAAAGTGTTGTACTCTTTTACCCTCCCACCAG
CAATACGTAGTAGGTACAGTTGTTCTACATTCTCACCAACACTTAGTATTTTCAGTCTTTTTCATTTTGGTCATTCTGG
TGAATGTGTAGTGGTATACTACTGTGGTTTTAATTTACATTTCCCCGATGAGTAGGAATATTGCTTACCTTTTGATGTG
TTTATTGAACATTTGGATATCTTCTTTGTGTTATGACCATTCAGACATTTGTTCAGTTTTTATTTTACTTATTGATTTC
TGAGGGCTCTTTGTATATTCTAGACATGAGTATTTTGTTAGACATGTGTATTATAAAGTGAATATTTTGTTCTAAACAG
TGTCTTGAATTTTTACTTTATGTTTACTTTGAATATGTTGGTAATCCTAGGGACCTGTGAAATATGAGGGAAGTGTGCA
GCAGGGAGAGGAAACTGTAAGGCAAGAAGTGGACCCACCTTAATAAGGGGAAAACAAGAATGACATTTAACCTGCAGAG
CAATTTCACTTGGAGACAAGGACAGCTGGTCCCTTGAATATTGGATGGTGGCAAATAAGACATCCAAGCACTAAGAGGG
CAGGCAGAGAAGAGTTGAGAATGAAGCAACAGCATGCTTATGGTGGCTGATGGCCGGGTAGTGAGTAGACAAGAGTGGG
GCTCTGGACATAGATGGTCTGAATTTGAGTCCTGTCTCCCACCTACTACCATCTTGTGAAGGTACTTAACCACTCCAAG
TTCCTAATTTTAAAAAAGCAAAAGTAGGAATAATGCGAGCACCTACTTCATGGGTTTGTTCTAATGGTATACTACCTAT
CCCCATTTTTCACATATTGTGAATACTTAATATATAACATCAAAAACTGCAACTCCTATGCTGGGAAAATATTAGAACA
AATAATGTTTGTTGTTGTTAATATTTGTTTACTTATTGGAATTGGCTTCAGAGATACTCTACAAATAACTCTTGGGGTA
GAGATGGATGTTCTAGCAGATTTGGGAGTCAATCAGAAATTGGCTCCTGTTTCAGAAAGTTACAGTTATTATGGACTTG
TGACATTTCTGTTCAGAAGTCTGTATCTGGCATCTTCCCGCACACATGTCTTGCTTTCAAGTGCTGTTCAGTTATGTTT
GGAATGAGAATGGTGGTCTCCCTACTTCTGCTTCACTTCTTCCACAACCTTGCTGACTTCTAAATAGTTTCCTGCTTAG
AATCCTTAGGAGGAATTAGGATCTCCTTTCAGCCCTATCTTGGGCACTGACTTACATTCCCACATGTGGTCCATGTGCC
CCTAGACAATCTAAGGAGAGTCTAGCTTGCCACACATGTGGAAATCATTCCCAGTTCACAGGTGGGAAGTTATGGGAAT
GAAGAAAATGTGGGGGAGGTAGCAATAAAACTCTCTACTTACATTTCATTGCTGCATCTGCTATAATAAAATGAGAGCC
AAGAGCAACTTATTCCCTTGTGACATGATGACACACCTCTGGATAGATGTATATTCAGGGATATGGGTGGGTGGAGAAT
GTTACAAACACTTTCTCATCCCTAGTATCCTATTACCTGTCTGAAGAAGTACACTGTGTACCTTCGTATCACTATGTCC
TATAAAAAAAGAAAATGAAAAGAATGTAAAAGAAGACATGGTCACTTTTGGGGATAAATTTAACTACCCAACAGAGAGA
GAAGAATTACTTTATTCATATAAGGGTTCATTTTACAAGGATCTTCCAGAAATATTTCCTTGATTTGTGTGCTATTCAC
AGAGGGACTGGTCACAGATGCCAGTTAGACATTGGATTCTTTGACTAACCACTCTTCATCTTGTGCTCTTGAGTACAAA
CAGTACGTTAGAGAGAACATTAAAAAAAAGATTGTTTTCAGCAATTTATTCCTGAATCAAAATCCAAACAGAAAATAAA
AAAGGAAAAACAGAAGGCTGGATCAGACACATCTGATCTTTCAAATTTGGCCTTTTAAACTTAAGAAGGTATTAATGGG
CATTTCATATTTTAAATAATTTGGATATAAGGGTGTTTATAAAGCTAGAGATTGTATTTCACAGTCTACCATGAAGCCT
GTACCTTCATGTTTGATGTATGTTCAAGCTTTAAGTGATTTATCTAAGTTCTTATTGAATGTTATATGGAAGATCTATA
ACCCACTAGGCAAAGCTTCCCAAAATTGAAAATAAAACACATAATCATGATTGTGAAACATTCTGTAGAAATATAGTAT
TCTTGAGCTAGATGAAATTTTAAAAGTAATCAATGCCAAAAATTGGGAAACAATACTTCCAATAATCTTGAAGATGCAT
ACTAAGCAGACAAAATTGGATTCTTTTGGTTTTGATTGATTTACATGCAATTTATGATTGTAGTGTTTATCTAAACTTC
TCAGGATACTCACAAAATATCACAAGCCTTTTATTTTAAAGCATTGTTCTGATTTAATCTTATCTGTCTTTGCCTTAAA
CTTTGTAAATTTGTGATTATTTTTGTTTTGTTTTGTTTTGTTTTGTTTTTGAAACGGAGTCTTGCTGTGTCACCCAGGC
TGGAGTGAAATGGCGTGATCTCGGCTCACTGCAACCTCCGCCCCCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCA
AGTAGCTGAGACGACAGGCATGTCCCACCACACCAGGCTAATTTTTGTATTTTTAGTAGAAATGGGGTTTTGCCATGTT
GGCCAGGCTGTTCTCAAACTCCTGGCCTTATGAAATCTTCCTGCCTCAGCCTCCCAAAGTGCTGGGACTACAGGCGTGA
GCCATCATGCCTGGCCCCAAATTTGTGATTTTCAAGATTAAAATTAGATTCTAAGAGTGATGGAGCACTTTAAAATATC
TGGATAAAAATCATCTTATTTCCAGAATCAGGGCAATTCTTGAATCTAATCTAAAATAAGCAATGTAAAAATGCTGACT
TTTTTCTCACCTATCATAGACTCTCTAAAAGGTTTATGCTATATCTGCCATGCCTTCAATTTACAAAATAATATGATCA
TGATTAAACTCCAGTGTCTTTTTCAGGTTATCACAGTACCTTTTCATTATTGTAGTACATTCTGGTGTCCCCATTAAGG
ATATGCTGAATGGACTGATACTATACCACAGTATTTTACTTTATATCTGTGTGTCAGTAAAGCAGCATGTACCAGGGGA
AGGTTTACCTTTAGAAATCAAAGGCTTCTATTTCACCAGGCTCCCACGTTGTTAAAAACACTAAAGAGGGTGACAACTT
CTGCGTTCACCAACATCAGAGCATCTAGTCCCTATTTTCAAAACTTTCTTGTGCCAATATGACTTGTTTTAGTAATAGA
GATTGGTTGGGGAATCCCATATTTTTTAAGGCAAACCCAAGGAAGCATTTATTTTACCGTGAAAAGTGCTAGGGCACAA
TACTATATTAAGCACAAGGCAGAACTCAACAAAGCCCTTTCCTTTGATTATTTCCATCACTCAATAATAATTGTTCCAC
TCCATAGATAGTTTCTTTGCAACAAACACTGCCCTGGCTGACCATCCTTCTGTAATGCAGAACTGTGAATCACTGAAGT
GTTTAAGGAGAGCTTATAATTCTTTAAAAGCCTTTTTATTCTGTTTTACAGTATTTGTGTTTATGAAAAAAATGCAGGT
AAAAATATTCTGACCAAATTGTATTTGTTTAATTATTATGTATTGCATAATGTATAATACTGATTCAAACTTAACATGA
CCAGAGTGCATTGCTTGGAGAAATCCAAAATGAAAAATATATTTCAGTTGAAATTCATTAAAGGATGAAGTAATCAAA
CTTTTTTTCTCTACAAATGAGCACTACAAAATGGCAAAAGTTTTCTTTTAAAAAATCTGTATATAGAAAAAAACTATAG

Fig. 9.135

AAAAAATATATCACTTCTTGGGTTAAACACACTTCCCCCCAACCAAAAAAAAATTCTAGGTACTTAGAATTCTTTCTAG
AACTTAGAATTTCCATATTATTTTTCATCCCATTTCTCTCATTCATTTAGAATCTGCCCTCCAGTTGAAAGGAAGTAGA
TGGAGCCGGGCACTTTTAGATTATTTCAAATCTGAGGAATTCAACAAAAATAAATGCTATTTAGTTATGTTGTTTGAAG
TCATGTATGCAACATATCTGGATGATGGGTCAACTTTGTTTAATAGATTAGCATCATTTACACTGAAGTTCGTGGCTCT
GAGCTTCGTTAAAGTGAGACCTTTGTCCACATTCCCAGGAGGGCTTTTTCTCAGGGGGTTCTGAATTTTACCATGACGT
AATTCCTAAACAGTTGTGATTAGTGCTAAATGTTATCATAAACACACACACACACACACACACCCCTTGCTGTGTGAAA
GCTAGATATAGATATTAAAAACTTTAGAATACTTGTTTTTAAATATGTAATTTATAATATATAAATAATATTTAGAAT
ATAAAGTTTATAATACATAAATACTATACTTCTTTACCATTCACTTTCTAGAACTTTCCCAGCTTTTGATCACATATTT
CAAGGGTGGTCTCCCTCTTTACTCCTCTACTAACTCTTCTGTGTCTCAGTTAACATGTGATTTTGGCTTTCTTATTTCT
CCAACATTATTTAATTCAGACTAACTTTATTTCTTGAAGGTATATACCAGACATACCTCGGAGATATTGTGGGTTCAGA
TCCAGGCCACTGCAATAAAGCAAATATCACAATAAAGCAAGTCACACATACTTTTTGGCTTTCCAGTGCATATAAAACT
TATGTTTACACTATATTGTAGTGTGTAATAGCATTGTCTCTAAGAAAACAATGTACATGCCTTAAGTAAGAAATACTTA
ATTGCTAAAAAAAAAAAATGCTAACAACCATTAGAGCCTTCAGCAAGTCAGAAACATTTTGCTGGTGGAGAGTCTTGCCT
CAATGTTCATGACTGCTGACTGATCAAGGTGGTGGTTGCTGAAGATTGGGGTGGCTGTGACAATTTCTTAGAATAACAC
TACAGTGAAAATTGCCACATCCATTGATTCCTCCTTTCATGAACAATTTCTCTGTAGCATGCAATGGTGTTTGACAGCA
TTTTACCCATAGTAGAACTTCTTTCAAAATTGGAGTCAATCCTCTTAAACGCTGCTGCTGGTTTATCTACTAAGTTTAT
ATAATATTTTAAATCCTTTGTTGCCATTTCAACAATGTTCACAGCATCTTTACCAGAAGTAGATTCTGTCTCAAGAAAC
CATTTTCTTTGCTTCATCCAAGAAACAACTCCTCATTCTTTCAAGTTTTATCATAAGATTGCAGTAATTTCATTACAAC
TTCAGGTTCCATTTCTAATTCTAGTTCTCTTGCAATTTCCAGCACATCTGCAGTTACTTTCTCCACTTGAACCCCTCAG
AGTCATCCATGAGGGTTGGAATCAATTTCTTCCAAACTCTTGTTAATGTTGATATTTTGACCTATGCCTATGGATCACA
AATATTCTTAATGGCATCTAGAATGGTGAATCCTGTCCAGAAAGTTTTCGACTTACTTTGCCCTGATCCATCAGAGAAA
TAAGTGTCTATCATAGCGATAGCCCTATGAAATGTATTTCTTAAATAATAAGGCTTAAAAGTTGAAATGACTCCTTGGA
ACATGGGCTTCAGAATGAATGTTGTGGTAGCAGGCATGATAACATTAACCTCCTTGTGCATCTCCAGCAAAGCTCTTGA
GTGACTAGGTGCATTGTCAATGAACAGTCATATTTTGAAAAGAATCTTTTTTTCTGAGCAGTATGTCTCAACAGTGGGC
TCAAAATATTTAGTAAACCATGCTGTAAACAGATACACTGTCATCCAGTCCTTATTTTTTTATTTATAAAGCACAGGCA
AAGTAGATTTAGCACAATTCTCAAAGGCCCTAGAATTATTGGAATATTAAATGAACATTGTCTTCAACTTAAAGTTACC
ATCTGCATTAGCTCCTACCAGGAGAGTCAGATTTTCCTTTGAAGCTTTGAAGCCAGGCATTGACTTTTCCTCTCTAGCT
ATGAAAGTTGTAGATGGTATCTTCTCCCAATAGAAGGCTATTTTGTCTCCACTGAAAATCTGTTGTTTAGTGTAGTGCC
TTCATCATTGATCTTAGTTAGACTTTCTGGATAACTTGTCACAGTTTATACATCAGCACTTGCTGCTTCACTTCACACT
CCTTTTTTTTTCCAGCTTTTATTTTAGGTTCAGAGGGTATTTATGCAGCTTTGTTAAATGGGTAGCTTGTGCACCCTGT
ACTTTTATGTATTGGAGATGGCTTCTTTTCTTTAAACATCATGAACCACCCTCTGCTGGCATCCAACTTTTCGTCTGCA
GTCCTTAACTCTCTCAGACTTCATTGAATTAAAGAGAGTTAGGGCCTTGTTTGGGATTAGGCTTTGGCTTAAGGGAATG
TTGCGGCTGGTTTGATCTTCTATCCAGACCACTGAAGTTTTCTCCACATTATCAATAAGGCTGTTTGGCTTTCTTGTCA
TTTCTGTGTTCACCAGAGTAGTACTTTTAATTTCCTTCAAAAGCTTTTTCTTTGTATTCACAACTTGGCTAACTGGTAC
AAAAGGCCTGGCTTTCAGCCTGTCTTGGCTTTTGACATGTCTTCCTCACTAAGCCTTATTATGTCTAGCTTTTGACTTA
ATGCGAGAGACCTGTAACTCTTCCTTTCACTTGAACACTTATAGGCCATTGTAAGGTTATTAATTGGCCTAATTTCAAT
ATTATTGTGTGTCAGGGAATAGGGAGACCTGAGGAAAAGAGAGAAATTGGGGAATGGCCAGTCAGTGAAGCAGTGAGAA
TACATGCAACATTAATCCATTAAGTTTACTGTCTTACATGGGCATGGTTTGTGGCACCCCAAAAATTAAAATAGTAACA
TCCAAGACCACTGATCACAGATCACCCTAGCAGATATAATAATAATGAAAAAGTTCATAATATTCTGAGAATACCAAAA
TATGACATAGAAACACAAAGTGAGTACATGTTATTGGAAAAAATGGTGCCAATAGACTTGCTTGATGCAGCATTGCCAC
AATATTCAATTGGTAAAAGCACAATATTGTGAAGTGTGATAAAGCAATGTGTTAGTCTGTTTTGCATGGCTATAAAGGA
ATACGTGTGACTGGCTAATTTACAAAGAAAAGAGATTTATTTGGCTCATTGTTTAGCAGGGTGTCTGGGCAAGGCACCA
GCATCTGCTTGGCTTTTGTGAGGCTTCAGGAAGCTTTTATTCATGGCAGAAGGTGAAGGGGGAGCAGCTTTGTCAGATG
ACAAGAGAGGGAATAAGAGAGGGGGCAGGTGCCATATTCTTTAAACAATTAGATCTCACAATAACTCATGACCACAGGG
AGGGCACCAAGCCATTTATGAGGGCTCTGACCCCATGACCCAAGCATCTCCCACTAGGCCCACCATCAACATTGGGAAT
CAAATCTCAACATGAGATTTGGAGGGTATAAATACCCAAACCATATCAAGCAAAGCACAATAAAACAAGTATGCCTGTA
TTTATACACATATTACAAAACAGAATTAAAAACAATAAAATCATACATGCAAGGGATTCTGGTAAATATACTGATCCCC
TCAATCATGCATTAGTCATATATTAATGTATTCACTTTATATTCAACCAACAAATAGTGAGAGTCTGATATTTGCTGTA
TACTGAGGTATGCACTGGCGACCCAAGGCTCAACAAGACAAAACACAGCCTTTTCTTTCACAGGGGATTGAATCAAGTA
GGGCACGTGCAAGAAAATAGACCACTATAATCTTGTTTGTTTCATATAATGTACAAATATGACTGCAGACAAATGGAGA
AATATGAAATCTCACTGGGGAGCAAACTCACTTTGGCTTGTGAGGAACTAACACCTAACCTGAGACCAAAATAAGATGG
TTCCAGGAAGAGAGAACAGCAGGTCAAAGTCCAGGGATGAGATTAAAGTAGAGTGTCTGCACTTAGCTAAATAAAAACT
GCTAAAACATGGCTAGACCAGAATGCCAATTGAAGGTACAGTTGATAAAACTTACCATTAACTTTTCATGTAACCAATA
TGTGAGGTTTTGTAATATTTTCCAGTATGCTAAGCAGCTATGATATAAACACTGAAAAGGCAAACAGTTGGATTATTCC
AAAATTGGAAAGCAGGTGCAATATAAGAAAAATAGGGCAAGGGATTTGAAGGTATTTGAAAGAAAGTGATAGAAATGAT
GAATTGTGGCAACTTAGCTGGTTATGGAAATGAGTGAATATAAGAAGATACTGATATAGAAAGTATTCAAGGTCTCTAG
AAATCTCTATGATGTCAAACAGGTGAATTAGAATAACTGAGCAAACAAAAGATAGATCATATTTGGAGGACAGAATGAA
CTTTAAGATGTAAGTGCTAGAGGTAATTTAAGGTATGTTCAAGACATAGAAGGGTGTCAGGGAAGAGGGTGACTGCCTT
GGAAAAGATGTAGCTGAGGAACTGAGAGATCGGGGCATGAGGTGATGCCTCCACATCAACATCAAAGTCACCCAGGACT
GCAGCAGGATTCAAGCTGTCAAGATGACAAAAAGGTGGGCAGTTTTCAGTGAATGAGAAACTGACCAAAGGGACTGGCA
GAAGTCAGAGACAAGGAAGTAGAGTTGATTGGCATAGATGTCAAACGAGAAGTTTTTACAAGAAGGTGGAGGAGTAAGT

Fig. 9.136

AAAAGTGAGTAACCAGGAGAGCACCCATTTCATCTTGGGACCCAGAGAGGGCATTGAGAACCAGAGTACCTTACCCTGA
ATCCACCACAGGGAAGTGACATCTTTAGCGAAGAGTCAAATTTGAGAGAGGTTAGGATCTGGGATGACTTTTTGGTGGC
AAGGCTGAGGATGAAGTGAAGTCTGTTTGCCATGGGAAAAGGGATCCAGAGAAACTGATTGAATAATATGGAAAGAATG
AGAATGGGAGGATAGACAGGGGAGAGAAATCACAGTGCAACATGGGGATAAGAAGTTGAAAGAACACAGGGAGAGGAAG
AAGCTCTGTATCAGGTGGTTGTCTGAGATATGATTATGAAACAGCATTCCAAAATATTTTCAATAATTGGTCCACCTGT
CCTCTGACTGATGGGTGTTAAACCAGGGAACAAGAAGTTGAGCATAGCTAGTAGGTCTTTTGGAAAGACCATAACGTTT
GTCCTAGTCCCAGTAAGTAGGTCTGCAATGGTGTCCTTGGGTTCCTAGTACATTTCAGCATCTATTGGAGAATAGGAGC
TTCTGGTGTTTCAGTACTTCTGCATCTTCCAGATTACTCAGCTGTTTCCCAGATTTATTACAGTCTCTGGAGTATGGAG
AAGGATCTGATTTTTTAAAAAATATGAATTATCATTTTCAAAGTATTAGTTTATTTTAAATAATTTTTATATCTAACTC
TAATATTTTGCCAGCAATAATAACATCTTAGGTATTTTGAATTAGCATTTGAGTTTGCTTTTGAGAATTTTAGTTCTTA
GAAATAATAATTGAATTAAACACTATTGCTTTCTTATATATTCTTAAATACTATTTCTGGCATTCAAGCATTATTCCAG
TTCGTCATGCTGCCAATTTTAGCAATAAAATAAAGAATAAAATTGAATTCAATGTGGAAAAATTCTATTTGTAGAAAAC
ATTCGTCTGTAAACGGGGTTACTGTTGTGACCTTAGTGAAACAACAGAAAGGCACGTGCATACGGTTTTGCCCTTAGCT
TGGATGTAACATATTATTTGCAGACTTTAAGTCATAGCAACCTATGATCATGCTAATTTTTATTTAAGGCTATTTGATA
GAGTTGTATGATTGAGACCTGGAACCAAGATCCTTGATGTAATACATATGTGCACACAATTTTTTTATTCTCTTCTCTT
TGGTGACCTTGTCTGGGTCATTTTTTTGTTTGTTTGTTTAATTTACACTGTTTGAAACAGTATCTGTGACTAGAATTTG
GCAACTGTAGAGTATATCATATGTACACAGTGCCTTAGCAAAGGGTTTTAATTAAACTCAGTGGAGGAGACCCAAGCAG
AGGAGCCTTCATTTGTCTTAAGAAGAAATGTCAAGGTTAATTGATTTTCAGAGGATTATCTGCAACAAATAAAGACCAA
GACTCATATCTTCTTATTTTGGCTTATAAATTCTGGTATGTTCTGTTCAATATCCACTGAAAAAAACTGAGATGAGAGT
GTTTCTATAAAACTCTATATGTCAAAGCATCCTTTGCAGTTGGCAAAACTGAATGAATGACAGTGAAAATGTATACTTA
TGGATTATGATATAGTCATTAAAATGATTATTATGATAAGTATATGGTAACATGGAAGTATTTAGAATGTTTTGAGGAG
AAAAGCAAAATATACAAGTATATCCAGGTTAAAGTTAAAACACTGCAAAATATATGCCTGCATGTGGCTGAGAACTGGA
AAACAATGTGAAAATAATTTGAATTTTTTGATTTACAAAATTGTGGTTTTTTATTTTTCTCACATTGATTTCTATTAAT
GAAAATAAGTGTTTATCCAATCAATAAAATTACATTAAAATTTATTATTTATTTACAATTTCATTCATACAAATTCATC
TATTGTGTCTTAGTATATGACAGACACAGTTTGAGGTACTGGGAATATTTTATATGTAGATTTTAAAAATTCATGAACT
TTTGTTTTTCACAGGCAATCCAATAGGAAGTTTTGGCAACTATGGTGGGAGGTAGGGATACTTGGGCCTTTCAGAATTC
TCCAGATCACTTTGTATAACCATTCCTCTGTTGGTGACCGACTCCCCAAAAAAGATCACCAGCAGAACCAAGTGAAACT
AAGTATTCATCTCAGTGAAATAAGGGAGGACATCACCTTTAAAATTAGTAGTATTTTGGAAAGGGGAAGTAAAGGGAAG
ATATTTGTAGAGTTTTATAGCCAGGTCTGGGAGCCTGATCTTGCAAGGTGGAAAAATGGCTGGCATTAGGCAGAATTTA
GAGCCTAGCAGTTCTGGATTAGTGGGGTCTCTAAGAGCAGTGAGGTTCTCAAAGTGAACCTTGATAAGTGAACTGTTAG
TCTTATTGAATAAGCTGGTTCAGGCCATTTACAGCCTTATTTTCCAAAAGCAAACATTTCCTGGAGCAAGTACCTAAGT
TATTTTTGCTTGGTCTCCATGTGCTCAGCATTAAAACAGGCATTTAAACTTTGACTCCAAATTGTTTAGCACTGGGACA
GAAAAGTATTTTGGTTTCAGTTTTTACCTTCTTTGTGAGCGACCTAGGTTTGATCAACTCATTTGGCTGACAAGCCGGA
TCCTTTGTCCCTTATTTTATTTTTTTAGACTTATATTATTGTCACCTATATTGCTTGGAAATTTAGGAAACACAGTCCT
TGGGATAGCTGGGGGGATGAGAAGTCAAGAGAGGTAAGGTCTTAGGGTAGACAACTGGGTAGATACTGGGCTACTCAGT
ATCCAATCCTCTTCTGTTTTGGGGGAGTTTCAGAATAGGTGAGAGAAAGGACCTAGCCTTCCACTAGGGGAGTAGGAAT
ATGCATTCCCTCTGCATGCCCCTCTGGCAGACAGAGGGAGGGTCTATAACCTCAATGTAGTCAATCTGATGTTCCTAGC
CAGGACTTTGAATCTTGAGGGGATGGCTCAGACCATCACATATGCCACTATCGAGTGGAAGGGCCAGTGGCATCTGTTG
TAGCTGCTGACAGTGTGGCGAAGAGCAGTGTGTGCCCAGCAGGTGAGGAATAGGGTCCCAGGCAGACTGATCCAGCCTC
CCAGCTGCTTATTATCTTCACTGGATTCTGCTCAAGTCTGCTTCTTCAAGCTCCCTGTTTATTCTGAGTTCTATCCTAT
ATTCTTTTGATGGATTCCTTTTCCTGCTTATGTCAATCCATCATTTCTATTGTTTGCAAATCACAGCCCTTGATCACTC
TAGAAACTAAAGTACAGAAAGTGCCCTGACTTTGCTAGAAGTTTAGGTGTAAAATTAGTAGTAAAGTTAGTAAGGAAAA
ACCAAAGGGGAAGATTGAATTTTATTTTAATGCATTATTTTTTTACATAAAAGATAACAAAAGGAGGGTAGTGAAGAG
AAGAGTCTCTTGAGATGTCCGTGGCAAAGTTTTTAAAGCTCTCAATAAGGAGACAAGGACTGGGCTTCATTGCAATTAT
TCCCTTTTGACTGTTGAAGCTGGTAGGCTTACAATGGACTCCTAATGAGAGTGGTTTGCACTACAATTAATTAAGTGCA
TGACATTATAAACTGCATGTCTCTTCCCTCTGGAGAATATTCTTCCTATATAAGTGCTATTTTGTTTTAATTTCTCTCT
CTGTCTCTTCCTCTCTGTTTCCCTCTCTTTGTCTCTCTCTCTTTTTTATTTATTTATTTATTTTTTATTATTATACTTT
AAGTTTTAGGGTACATGTGTACATTGTGCAGGTTAGTTACGTATGTATACATGTGCCATGCTGGTGCGCTGCACCCACT
AACTCGTCATCTAGCATTAGGTATATCTCCCAAAGCTATCCCTCCCCCCTCCCCCCACCCCACAACAGTCCCCAGAGTG
TGATGTTCCCCTTCCTGTGTCCATGTGATCTCATTGTTCAATTCCCACCTATAAGTGAGAATATGCGGTGTTTGGTTTT
TTGTTCTTGCGATAGTTTACTGAGAATGATGATTTCCAATTTCATCCATGTCCCTACAAAGGACATGACCTCATCATTT
TTTATGGCCACATAGTATTCCATGGTGTATATGTGCCACATTTTCTTAATCCAGTCTATCATTGTTGGACATTTGGGTT
GGTTCCAAGTCTTTGCTATTGTGAATAGTGCCACAATAAACATACGTGTGCATGTGTCTTTATAGCAGCATGATTTATA
GTCCTTTGGGTATATACCCAGTAATGGGATGGCTGGGTCAAATGGTATTTCTAGTTCTAGATCCCTGAGGAATCGCCAC
ACTGACTTCCACAATGGTTGAACTAGTTTACAGTCCCACCAACAGTGTAAAAGTGTTCCTATTTCTCCACATCCTCTCC
AGCACCTGTTGCTTCCTGACTTTTTAATGATCACCATTCTAACTGGTGTGAGATGGTATCTCATTGTGGTTTTGATTTG
CATTTCTCTGATGGCCAGTGATGGTGAGCATTTTTTCATGTGTTTTTTGGCTGCACAAATGTCTTCTTTTGAGAAGTGT
CTGTTCATGTCCTTCACCACTTTTTGATGGGGTTGTTTGTTTTTTTCTTGTAAATTTGTTTAAGTTCATTGTAGATTCT
GGATATTAGCCCTTTGTCAGATGAGTAGGTTGCGAAAATTTTCTCCCATTTTGTAGGTTGCCTGTTCACTCTGATGATA
GTTTCTTTTGCTGTACAGAAGCTCTTTAGTTTAATTAGATCCCATTTGTCAATTTTGGCTTTTGTTGCCATTGCTTTTG
GTGTTTTAGACATGAAGTCCTTGCCCATGCCTGTGTCCTGAATGGTATTGCCTAGGTTTTCTTCTAGGGTTTTTATGGT

Fig. 9.137

TTTAGGTCTAACGTTTAAGTCTTTAATCAAAAGTTGTCCCTGAAGGAAAATTAACTCTGCTGTTAGTCCACTGAGAAAG
CTTCTCTTTTAATACTGGAACATATCTTTGTCTAACTCTCCCTCACACCTAGTGCTAAATTTATCAGCGTTGTTCCTGA
TACAAACATTTTGAAGACAATCGTGAGGAAAAAGATGAAAAAAGTTGCATTTAACTTTTGTTACAGGTGTCCTTGTTCT
CCAGAAGTTACTGTCTTTGTTGTAGTGTGCATGCAGTCACAGGAGTGTGCATACATGTGTGAAGTACTTGAGAAGTGTA
TTTGTCCGTTCTCACACTGCTATAAAGAACTGCCCTAGACGGGGTAATTTACAAAAGAAAGAGGTTTAATTGACTCACA
GTTCAGCATGGCTGGGGAGGCCTCAGGAAACTTACAATCATGGCAGAAGGGGAAGCAAACCCTTCTTCACGTGGTGGCA
GCAAGGAGAACTGCAGAGCAAAGTGGGGAAAAGCCTCTATAAACCATCAGCTCTCATGAGAACTCACTATCACGAGAA
CAGTATGGAGGTAACTGTCCCCATGGTTCAATTACCTTCTACCAGGTCTCTCCTGTGACACATGGGGATTATGAGAACT
ACAATTCAAAAGATGAGATATGGGTGGGGACACAGCCAAACCATGTCAAGAAGTATTTCAGAGACAAGTCATTCCCCAA
ACCTTATCATCAGGGTCAAGACCTGGCAGGTGAGACATTAGCAGGTGAACACAACATTCTCAGAAACCCTTGAGAGTAC
TCCTTTCCCTCCAGGCATCTTCTTTCAACCTTAATATATTCTATTCAATTATATTCACAGCTTTTTACCTCAATTATAA
TTCCATTCTTCCAAATTTGTTTTCTTCTCCCATCTTTCCTCCTAATAAAATATCTATTCTTCAGATAGTCTTCCTTTGT
AAAATAGAAAGGATCTACAAAAGCCATTCTTTGTGAGATGTGAATCATTTCAAATAAATTAATGCCTTGTTCTAATGTG
AATGGTGGACTTGTGAAGAGAAGTGGGTAGATATTTGAATTTCTGAATGCTTTAGAATATTAGTTGCACATGCAGTAAT
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TGATGAACACAGTACTCTTTCTTCTTTGTCTTTTATCTTCCATCTCAAATTGTCAATAATAAATTTGAAGAATGGAGAA
TAATACATTATCACGTGCCAGACCTTATGCTAAACACTGGATATGTTATATTGTGTTTCATACTCAGGATGATGCTACG
GTAGGTACCATTATTATCTTATTTTACTTATAAGAAAACAGAAGCCTGGAGAAGTTAAACAATTTCCTCAGTATCAGAA
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TATATCCCATTACCCTGATAGTGAGCATAGTACAAGATAGGTAATTTTTTAATGCATCCCACCCTCCCTCTACCCTCTA
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GAATGTGCAATATTTGGTTTTCCATTCCTGTGTTAATTTGCTTAAGAATATGGCACCCAGTGGGCCGGGCGCAGTGGCT
CACACCTGTAATCCCAGCACTTTGGGAGGTCGAGACAGGTGGATCACCTGAGGTCAGGAGTTCTAAACCAGCCTGACCA
ACATGGAGAAACCCCGTCTCTACTAAAACTACAAAATTAGCCAGGCGTGGTGGCGCATGCCTGTAATCCCAGCTACTCG
GGAGGCTAAAGTAGGAGAATTGCTTGAACCCAGGAGGTGGAGGTTGTGGTGAGCTGAGATCGGGTCATTGCACTCCAGC
CTGGGCAATAAGAGTGAAACTCACTCTCAAAAAAAAAAAAAAAAAAAAAAAAAARGCATATGGCTCCCAGCTCCATTCAT
GTTGCTGCAAAAGACATGATTTTATTCTGTTTTGGGGTTGCATAGTATTCTATAGTATATATGTACCACATTTTCTTTA
TGCAATCTACTATTGATGGGCACCTGGGTTGATTCCACATCTTTGCTATTGTGAATAGTGCAGTGATGAGCATATGAGT
GCATGTGTCTTTTTAGTAGAATTATTTATTTTTGTGGAAGTATATACCTGGTAATGGGATTGCTGGGTCAAATGGTAAT
TCTGTTTTAAGTTCTTTGAGAAATCTCCAGACTGCTTTCCAAAATAACTGGACTAATTTACATTCCCACCAATGGTGTA
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GTATGTCTTCTGTTCATGAAGCCCTTTGCCCACTTTTTAATGGGGTTATGTGTTTTTTGCTTATTGATTTGTTTAAGTT
CCCTGTAGATAGTGAAAATTAGGCCATTGTCATATGCATAGTTTGCAAATATATTCTTCCATTTTGCAGGTCTTCTGTT
TACTCTGTTAGTTTCTTTGCTGTGCAGAAGCTATCTAGTTGGCCATCTTGGCATCTAATCTTTAATTTTCTTTCTAAAA
TATTTGAATGTTTTGCAATTTCTGACTGAAGTTACTTCCCTCTTTCTGAAGAAGGCCCTGCTGACATCAATAATTATCT
GAGAGTGACATAAGCTGACTCCGATTATGCCAAAGTAACCCTTACGTGGTATGAAAAGAAAATGAAGGTGACTATGATT
CCTGGGGCATTTGAGATTCTGAGAAAACTCCAGGTCAGCTCGCCATAAAAATTCCCCACACCTGTAGTTTAATTTACCA
ATTAGGAAATTATATATTTGGGGCTAAATGGTTTCTGATTTGTTGGCCTGAAAGAAATAATGTACTTTTAACAACTATA
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AAATTGGCACCATTAACTAAAACCCTTGTCCATTCAAAATAATATGTATTGTCACATAACACTAAGCTCTGTTATTAAA
CTGCCACAGATTATTGCTTTAACAGTTTGAAAATGATTTTTAGAAAATTGACTTTGTACAATGCTATATTAGAGTCTGT
TAATTGATGAGAAAACCAAACTCAGATGACATTTGCAAAAATAAAATTGGCATCAGTTGAAACATCTGTACCATTTCTC
TTATTTAAAAGACATTTTTCATCTGGAAAATGACTACTTCGATTAGCCTCAGATCACAACCACAAAATAAAGTTGTCTA
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GACATAGGCCTATACACCTGAGAGAGAAATATGTCATCTACAAAATGTAAAAATATAGGTTTTTGTAAATGCCTCTGAA
AGGATTATAAGAATCTACATTTTCCCCTCCCTCCTGGAGTTTGTCTTTCTATTAAGGCTCTAGACGAAGAAAAGCTCTA
ATATACTTTCCTTGGAGGGGTCATGAGACAATGAAGCATAATAGGATTTGAAGTATATTGGATATAAAATTCATGTGAT
ATCCTCAAGTAGAGAGATGTTATTTTACTGTTCTTTAATCTTTACTGTTGGCGATAATTGCCTTTGTAAACTAACTTTA
TGTTGTAAACTAGTAGCGAACCAGAGATTGAGTTGAGAGGTGGGGGTAACAGATGAGATCCTCACTTGTGAGGGCTCCA
AGGGCCTGTGAGGCAATGGAAAGGGCTGACCTTGCTACCTGGATGGGAACAATGCTGTTATCATTTTCATGTGCTCCTG
TTTAGAAGATGAGTTAACATCCATAAAAACAAGTTAGACTAAGGGTTGTCACACTACAGCCTGTGGGCCAAATGCTGCC
TGCCACTTGTTTTATAAATGAAGGTTTCTTGGAGCTTGCACTACTACTGCAGAGTAGAGTAGTGGAGATGGAGACCATT
CGGCCTGCAGAGTCAACAATGTTTAATATCTGGTGCTTTACAGAAAAACTTTGCCAAGCCTTGATTTAGACTTAGTAAC
TTTAGTAAGAAGTTACTGACTGCACAAATTACCAGGATATTTAAGCTTGTAAAGTATTAAAATACCATAACTATCTGCT
TCTTGTGGCAGGGAGGGGGCCAAGGAGAGGTGAAGTGGTTATAATGCTCGTGCATTGGTTCCTTCATTCACCAGAGTGA
TTGTGCGCCCTCTCTGAAACAGGGATAATGCCAGGTACTCAAGATACAGCAGTGAGCAAAAAGAGGCATAGTGCCTTCC
TTAATGGAGATATGCATTGGAGTCACATAGCATAATAATGTTGACAAATATCCCTGCTCTCATGGATCAAGAGGTTAGA

Fig. 9.138

GTTTTAGGGTAACCATGGAAGATCTCACTGAGAATGTAACTTTGAATAAAGGATTAGAGGACTTGAGGAAGCCAACCAT
GCTGCTAGAGTTTCTCTGCAGAGGAAAGGGGAGTGATGAGATATAGGTGAAGGACAATGTGAGCCAAGATTGTTTTTT
TAAGTTGAGGAATTAACAGCATGGTTGTATGCTGAGGGGGACAATTCAGTGGAGAGGGAAAAATTGATGTTGCAGGAAA
TTGCTGGGATAATGTCTTTGAGCAGATAAAAAGGGATTGATCCAGTGTACAACAGAAGGGACTAGTCTTGGTTTTGGAT
CAAGGACAGTTTATCCATAGTAAAATAAGAGAACGTAGAGTATATGGCACAGATGCAGGTCATTGGGTAGTCGTGGTG
GTTGAAAATTGTAGAAGTTCTTTTTTTAAAACTTTAATTTTTCTTAGTATGTGCAAAGGCCTTGAAGCAAAATAGAGCA
TGGTATAATCAAAGAATTGAGAGAAGAAAAACATAATCTAACTGTAAATTAAGCAATACCATGGAGCCAGATGAGGCTG
ACGAGGTACACAGGATACAGACGTCAGCAAGACTAAGAATATGGTAATGCTAAACCAATTAAGAATGGGGTTAAATCAA
ATTTGCCTTTTTAAAAAAAGATGACTGTGGCTACTGATAGAGATTGGATAGGAGAGTGCAACAAGAGTTTCTGTGGAGA
GACCAATCAGGAAGCTACTGCAGTAATTCAGGTGGGAAATGAAGGCWTCATGGTCTAGAGTAGAGGGAGTGGGGAGAAG
AGAAATGATCAGATTTTGAGAGATATTTAGAGGCAGAGTAGATAGACTTACCTCACTTATGTTTGGGTATAGAAGACAT
TGCCTATGTAAAGACTGAGTAGAGAAGAGAGCCTAGGAGTAGATGTGGACACTCAGGAGAAGGATTGAGATCCTGGTTT
AGAACACTGAGTGAAGAAGCTGGGTATTGTTAAAGAAGAGAGCCAAACTTCACAACTGCCTAGCAGTGAAGAAGCAGAT
CAACAAAAATCATATGGTGCGGAAGGGATACTTGCCATTAGATTAGTCCAGCTGAAGCCAAACGCTGGTTGCTTCTGAT
TTTTTTAAATCCTATAAATATATTGGTTAATTTTATTTAAAAAAATTGAACTTTTCATTCTCATAATGAGACCAAAGTA
AAGGTCAAAATCTTAAGAAGAGAATGGGTCAGAACATAGCAGGCAGATTGTTGTTTGACATGATGTCAATGGACACTTC
AGTTGTCATGTTCTAGGCCCATTACATTGGCCTTTCCTCTTTTGAAGCTTCTCTCATGGAACCAAGTGCATTTTATATC
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AAGAAATGACTGTAGAAGTAAAAGAACAAGAGCTGGTCTTAGGAGTTCCATCCCTTCATCAGTCTAGGAGGGTTGGGAT
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TACTTGGGGGAGGCTTGTCTTCTTGATTACTAAGGTTAACTTAGTGCTTCAGAAGCCAGCCCGTTTTTATGTTCTGCTG
TTTTCCTGATTTTGGTGTGTCTTGATGCCACTGTGTTCTAGTAAAAATTCCCTTCAATAGACTGCCAGGAGAGCAGACC
AGGGAGTGTGAGTGTTTTGTGCATGGGCGAGCACATACAGATGTTAGGTGACAGTGGTTATTCAGTCATGCTTTCAGAC
CTGGAGAACAGTTCAGGTCAAAATCTCCAAGTCTGTGGAATGAAGCTTTGGGGGAATTAATCAAAATGTTACTGAAAGA
AAAGGGAAATCAAATCTGACTTCCACCCCTCTGAGATTTTTGTTGAGGACACAGAATGAGAGCATAACCTTCAGGTCCA
GAGTGGAATATAGAGAGATCTTCCACTGACAATATGCTATCAACAAAAGCAAGGTAGAGAGGAAACGTTGAGCCTCAGC
AACCTGTAAGTCAAGACCCTCTCCATCATCCCTAGATGCTTTTGCTCTGTCATTGGGATTGTGTCCCTTTCTATAACAC
TGTGACTTCTTTGGATCTCCACAGCCTGACTGTGTTCACGTTCTCCTCTCCAGTCTTTTAGTTTCTCTTACAGAGCTGG
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TTAAGTTAACATATATCCCAACTACCACAAAATATTATAAATCATAACATTTTATTAACTGCCCAACCCAATTTTATAA
TACATTTTCCCCTATGCTTGGCTAAATATTCTTTGATTGTCTCTTTAAATGACACTGAAATTGTAATATTTTCTATGTA
GAGATTGGGAAGATACTTTAAACTTTTCTTCAGGATTGTTGATTTTTAAAAAATTATTAATAGTTAGAAAAGTTTTGTA
ATGTCATATACATTCTTAACATTGTTATCAAATTTTGAGAAATATTTAAATTTTTTTTTCATGTAGGAGCGTAAGATTT
CAGGGCATTCGATGTGGTGTGTGTGTTTGTGGGTGTGTATGTTGACTAATCTTACATACTTGTATTCTTTTACCAGTTT
GTCATCGAAGTGTCACTGCATTTGTCATGAGATTTAGATCCTCTCTGTCAATGTCAACATTTTATATCAAATCAGAAAA
AAATTAAAAATTGTTTCAATGTGTGTTAGTTTGATTAACTCCTTTTCATTAATTTACTTGTCAAGCAACCCAAGGGCCA
ATTCATCATATCTATTTGAAATTTATCTCTTTCTCTTATTGAATTACCACTTTTGAGATGATCTGGAAAAAAATTGTTA
CAATGTACTGTCTGATATCTGAATAATTTCTATTGATTTAACCACTTGGCTTTACTGCATTTTCTTCATACTCCAATAA
TTGTATTTGAAATTTTCTTATTCATTTATATTTTTAGTCCTTTAATCTAAAAAAATTAAGGATAAAAAAGCATCCTTCA
CGTATATTGAAATCAGGAGTCAGTAATTTTTCACTTGTTTAAACATTCAAAACATCTTTCTAACTCACTTCTTGATATT
GGGATAATTTTAATTTTACTTTTGCAAATTTTGCCAAAGCATCTGGCTAAATAAACACACTTGCCAGGGCACCGCCCCA
GAGCCTCGGCAGGTACTTATGCAAGCAGAGAGCCCTGCAGCTTTGGCTTTTATCATCTTCACCATAAACCCATCTCTGA
TTCTCCCCTTTCCCTACAGCACTTTCCACTAACAATACACATACACACCCATATCACACCTATACTATTTATTTTTCTT
TATGCCCCTTTTCTGTAGTATTTATATCCATAGCAATTATCACCATCTAACACACTACATATTTTGCTTATTTATTTAT
TTATTGTTTATCTCTCCACACTAGAATTTAAGCTTTGTAAAGGCAGATGTGTTCCTTTCCTGAGGCTGCCATATAAATG
ACCACAAATGGGTGGCTCGAAACAGCAGAAATTTATTCTCTCTGAGTTGCAGAGAGAATTCTGCATCTCAGAATACAGT
TCAAAATCAAGGTGCTGTAGGGCTGGTTCCCTCTGGAGGCTCTGGGGGATGATTGCTTGCATGCCTTTCATAGCCGCCA
GTGGCTGCTTCCAACCCTTGGCACTCCTTGGCATGGGGCTTCATGAGGTTCAATCTCTGCCTGTGTCCTCTCGTGGCCT
TTTTTTTTTTTTAATCTGGGTCTCTGTGTCTTCTCTTTTTCTGATCTTAAACATAATTTCTTGAGGAAATCATAAATC
ATTGGACTTGTAGCTCACCCTAATACATGGTGATCTTATCTCAAAATCTTTACCTTAATTACATCTGCAAAGATCCTTT
TTACAAGTAAGTTTACATTCTTATTCCGGGTGAACTTATCTTTTGTGGACCACAGTTCAACTCACTACAGAAGTTACAA
TTTTCTGTTATGCTCACTGATGTGTCTCCAGCACATAGACCAGAGCCTGGAATGTAGTAAGTGCTAAATAAATATTTG
TTGAAGGAATGCATTGAGAGCCTATAGTGCCAGATGCTGAGGTAGGTACTTAGAGCACTGCAATTTAAATATTCCCTAA
CTATAATTTATCTTCTCTTTTCAATTCACATATAAATATTTTTTTAATTTTTTAAATTTTTTATTTTAGATTCAGGTGG
TACATGTGCAGGTTTGTTACATGGATATATTGCATGATGCTGAGGTTCGAGTTTCTATTGATCTTGTCACTAAGATAAT
GAACATAGTACCCAATTGGAAGTTTTTCAGCCCTTGCCTCCTCTCTCCCTCCCCTCTTTTTGAGTTCCTTGTGTCACTG
TTCCCATCGTTATGTATGTGTGTATGCAAATTTTAGCTTCCACTTATAAGTGAAAACATGCAACATTTGGTTTGCTGTT

Fig. 9.139

TCTGCATTCATTCATTCATTCATTCAATGGCTTATGGCTGCATCCATGTTGCTTCAAAGGATGTGATTTTGTTTTTTCT
TGTGGCTGTGTAGTATTCCACAGTGTATATGTACCATATTTTCTTTATCCAATCCACCGTTGATGGGCACCTAGGTTGC
TTCCATGTCTTTGCTATTGTAAATAGTGCTGTGATAAACATACATACAAGTGCAGGCATCTCTTTGGTAGGATGGTTTA
TTTTCCTTTGGTATTATACCCAGTAATGGGATTGCTGGGTCAAAATGGTAGGTCTAATTTTAGTTCTTTTGGAAATCTC
CAAACTGTTTTCCACAGGGTCTGAACTAATTTTCATTTCTGCAAACAGTGTACAACCATTCCCTTTTCTCTACCGTCTC
GCCAACATCCGTTATTTTTTTACTTTTCAATATAGTAGCCATTCTGACTGGTGTGAGATGGTATCTCCTTGTGGTTTTG
ATTTGCATTTCTCTGATGATTAGTGATATTGAGTATATTTTCATGTTTATTGGTTGCTTGTATGTCTTCTTTTGAAAAG
TGTCTGTTCATGACCTTTTCCCACATTTTAATGGGGTTATTTGGTTTTTTTCTTATTGATTTGTATAAGTTTCTTATGG
ATTCTGGATATTAGGCTTTTGTTGAATGCATAGTTTGCAAATATTTTCTCCCATTCTGTAGGTTGTCTGTTTACTTGGT
TGATAGTTTCTTTTGCTGTTCAGAAGCTCTTCAGTTTAATTAGATCCTAATTTTCAATTTTTGTTTTTGTATGCAATTG
CTTTTGGGGACTTAGTCATAAAATCTTTGCCTAGGCCAGTGTCCAGAAGAGTATTTTCTAGGTTTTATTCTAGGATTTT
TATAGTTTGAGGTCTCCCATTTAAGTCTTTAATCCATCCTGAGTTAAGAGGTAGGGGTCCAGTTTCATTCTTCTGCATG
TGGTTAGCCAGTTTTCTCAGCACTGTTTATTGAATAAGGAGTCCCTTCCCCCCTGCTTATTTTTGTTGACATTGTCAAA
GATCAGATGGCTGTAGGCGTGCAGCTTTATTTTGGGGTTCTCTATTCTGTTTCATTGGTCTATGTGTCTATTTTTGTAC
CAGTATCATTCTGTTTTGGTTACTGTAGTTTTGCAGTATAATTTGAAGTCAGGTGATGCCTCTGGCTTTGTTCTTTTTC
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AATAACATTGATAACTTCATAGAAATACTGTTGAATCTGTACATTGCTTTGGGCAGTATGGACATTTTAGTGATATTAG
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TGTAGTTCTCCTTGTAGAGATCTTTCACCTTCTTGATAGTCCTAGGTATTTGTGTGTGTGTGTGTGTGCACCTGCGTGT
GTGTGTGTCTATTGTTAAGTGAGATTGTGTTCTTGATGTAGGTCTCAGTTTGAATGTCACTGGTATATAGAAATGCTAC
TGATTTTCGTACATTCATTTTGTATCCTGAAACTTTACTGAAGTCATTATCAGGTCTAGGAGCCTTTTGGTGGAGACAT
TAGGTTTGTCTAGGTAAAGGATCACATCGTCAGCAAAGAGAAATAATTTTACTTCCTCTTTTCCTATTTGGGTGCCTTC
ATTTCTTTCTTTTGCCTGATCGCTCTGACTAGGACTTCCGTTACTATGTTGAATAGGAATGGTAGGAATGGGCATCCTT
GTCTTGTTCCCATTCTTAAGGGGAATGTTTCCAGCGTTTGCCTGTTCAGCATGATGTTGGCTTGGGGTTTTTCATAGAT
GACTCTTATTATTTTGGGATATATTCCTTTGATGCCTAGTTTGCTGAGGGTTTTTATCATGAAGGGATGTTGGATTTTG
TCCAATGCTTTTTCTGTATCTATTAAGATGATAATATGGTTTTTGTTTATAATTCTGCTTATCAATTCACTATAAGTTC
TTTGAAGATGAAAACTCTGTCTTTTATGGTGTTTGTACATTTTGAATTTCTTAATACTGTGTATGTAGCTGACAACACA
TAAATAGATATGCAAATGAGTAAGAGAGTCATTTGGGATCACTGCTGATTTAACTTATCTTGCCATGAAAGCATTCTGT
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GGAAATATTATTTGCCCAAGAGTGTAAAAATGTATGAAAGAAATATGTAAATAAAATCCTATATGTAAAATCTAATAAT
ATCAAAGTTTAATGATGAAATTTGTCAAGATGATTATAAAATATCACAGTTAAACTGTATATTATATTCATGTTTCTTG
CCATTTGTATGCTAAAAACTTATAATGATTTGAATGTACAAAATCAAAAATCGGGAGAAAAGAAGATAGATCAGAGCCT
ATTACCAATAATTTATCCTTTACCTCCATAAATGTTTGCTAGAAATGCCAAAGGCTCTAATTTGTCTATTTAAATGTAC
TTCAAAAAAGCATTCCCCAAGTTGCCTATTTACTCTGTTATCTCTATAAATCAGGAAACTCTCCAGGCTTTCCACTGTG
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AAATATGTGTAAAAATATACATGTTATATTCCTTTTCTCTATACTACCAACAGCCACTCCCATTCATGTACTCATATTA
GAAGGGAAGAGCTTTGAATATCATATATAACATTTTCAGATAAAAGAACTTAGGTCCAGAAAAGCTAACTCTTTTGCTG
GTGACTAAACATACACATACGTGCACTGACACACACATATTAAGTTACTGAGTTGATAGCAAAAAAAAAAAGTGCAACT
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TAAAAAAAGAAATGTACCTATTGTGGACTAGCTGATTGGATACCATGGCCACAGCCCTGATTTTCAGTAAAGACATAGT
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AAACTCTTTTTGGCTTTTCTCTAAATCTCAAAATTTGTTTCAATTTAGGCAATGGAATTGGACTAGTCAGTCTAATTTA
TTTTTGTTAGCCAGTTTCACCTCTCAGATTCCAGGGAACAAAGCCAAACTATAAGATATCTACTGAAAACATTTGTAAG
AAATAATTAAAAGCAGACTCTGAATAAGCATATAAAATGAAGCATTTTTATCACAAGCTTTATAAATTTTTTAAAAACT
GTGTTCATTTAATTCTGAAAGCATGCCTCTTTTGTAATTATGAAATACAGAAATATTTGAAATTCCCCAGTCATCTTGG
CTCACAAATAGAAACATTTGGTTGCGTTTGGTTCACAAGCACACAGGGGCCTGCTGCTTTTGGTTCTGTGTAAAGCCCA
TACTATTTCTTGCTTTTTTTTTCCACAATGAGTATGTGGGTGCTAGAATGTTATCGAAATATTTTGCAAGACATGAATC
TAAAATGAGCACTCTGCTATGGTTGCAGTTACAGTGCAAACCCCATCAAGTTGCTAGCATTGGACTGATAGACAAGGTA
GGGGCAGCCAGAGAGTCTGAGTTCCTGTGAGGAACTGCAAGGGGGAAGGGGCTGTGTTCAGGGGCTGTCCTGCAGGCTG
AAGGTTGTTATTAGTTGTGTGGTTTCTGGGCCCACACAAAACTCCACCTTCTCCCATTAGAAGTCAGTGTCCTGTTGAT
GTGACCACCTGCTTTATTATTCGGGGTTTTCTGCCATCTAAGACCTGGGCCACTCACCTGGATTTTTGAACTCTTGCTT
TTGCACTGATACCTGATTCAGAATCCGATCAATTGCCTTTCCATCTTTGTCTGTGGGGACCAGAAGTACAGAGGTCTTA
TAGGTGAGCTTTTATTCTTTCTTCCAGAAAGAGTATCCTATAACTGTGTCAGTGAGGAAGTGAAACACAACCTCCTGTT
TGAAACACAAAAGGAATTTAGAGAGGAGTAAAATACAGGGCCGTTTAATTATTCCCTTTAATAAGAAGCAGCATCCCCA
CCAAAGAACATGTCGATCTTACTTGGTGATACATTTCCCTATGGAGAAGGGAGATCTGATTGAAAGAAGACCGAAGGGC

Fig. 9.140

AGGAGGGAGGGAGGGTTGTAAAGCAAGGATGTGGCTCTGTGTAACCGGGATAAAAGCACCCTGCCTTAGGGAGATGTTG
TGAGAAATACCCCAGCACCCTCCTGCTACAAGAGGCAATCCTTATAGCTGGCTCTTGCCATGGTTAAAATGATTGGGAC
AAAAATATTAAAAAAGAAAATGCTCCTCGCTATACTGGTTGGAATCCTCAGGCTTGGAGTAGGAGGAGCTGAGTAATCC
CTGCAGTGTCCCGAAAGCTGGAATCCTGAGTAGATTCAGGCCAATTTGTGTGATATTCCCAGGGATTCCCTCCCTATTT
TGGGCAGAGGAATGGATTTGGATGGGGCAGCATGTTCCTGTGAGTTGGCAGGCACCCACTGAACAGAATAACTGATTTG
GTACCCAGACTGCAGATACCAGCTGAATTGCCAAGCAGATATTGCCTGAGGGAAATACCTGCTAAAGTTGAAATGATCA
CTACTTGGATGGGTTAAACATTTACCAGTATCAACTAGTATTATACATAGTGTTTTAGTTTTTCTGAAAATGTGCATGC
ACATGAGAAGAATAAGTATTAAGATGAAACTCCCAGTCCCTCTCCAGAGGCACAACCATGGTTACCAATTTCTTATATA
AAGTATATATATAAAAGCTTATATAACCTCTTCTTTTACTTATTAAATACTTGCATTGATTACTTTAGAATGGGCAAGT
AAAAACTAGTTTAATTGTAATAATTGTAATCACTCTAATACATTTTCTTATTCCTGAATATTTGCTTTGTTTTAAACTT
TAGCAATTATGAACCTTATACTAGTCTAGGAAAATTAATCTGTAAATATTTCTGTTGGAATCTCAGATTTATAATTAAA
AAATTATATAGGGTATGTTACATAATTTCTGATCAAAGATTTAGATTAAACAAATATGTTTGTGCACTTATTACATCGT
CAGCACTGTCCTGTGCCTCACTCAATACGTGAACTTATTTAATGTAAGTCCACTTAATTTCACTGTAGAAACCAAGGAG
AAAAAGGTCTGGGGCACATACATGGCATTCTTGTGAATCTTTCTGAAAGTGCTCTCTTACCTGACATGGTAGGGATATC
CTGAAAGGTAAGAAGGGAAACCTTCAGGGCAGTGCCATTTGCAGCTAGGTCTTTGAGAATAAGAATGAATTCTTATTCA
ATATGCTGGTGCCACAGTTAGGGCTAAAGTATCTTTAGACCTGCCATCTCTAATAATAACGGCCATTTCTGACTTGTTA
ATCTTCCCGGCTTTTTTCCCTACAATTTTAGGTCTAAATCTTCCATGTAAACACACTCTTTCATGCTGAATCCTGCTCA
AATAACTGCCAAGATGTTTGTTTAGTAATCCTGAAATAGAAGATTGGCTTCTATGCTAAGATAATTATTGGGAGAATCT
CTTCTTTTAATAAATACCTGGTTCTTCTCAAACCCATGCCAAGAAGAATTCTTATAATATCATTTCTTCTCAAACCCAT
GCCAAGAATAATTGTCACCATATCATTTCTTGCTATTCATCCCTTTTAAAACTAAGAAACAGGCCAGGTGTGGTGGCTC
ATGCCTGTAATCCCAGCATTTTGGGAGACCGAGGCCGGTGGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGGCCAA
CATGGTGAAACCCGTCTCTCCTAAAATACAAAAATTAGCCGGGCATGGTGGCGCATGCCTGTAGTCCCAGCTACTTGGG
AGGCTGAGGCAGGAGAGTTGTTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCTGAGATCGTGCCATCGCACTCCAGCCT
GGGCAACAAGAGCAAAACTCTGTCTCAAAAACAAAACAAAACAAAAAAACTAGGAAACATTAAAGCTTCCAAGGAATTG
AGCGTTAAGTGGGGTCTAACATTTAATATGACTGTAGAGTAACTCCTCTTTACTAAGTCTTTTTACTAGTTTCTCCCTT
TCTCTCAAATATGTACAGTTTAAATTGGATGGGTAAAGCAAATGGGAGAGTATTGCTACTTTTTAGTCATATTTATACA
AATGAATTATATAATATTAATTGTTCATAATATTCCTTGTAATTTATAGCACTGTGAGCAGTATAAATAATTTGATAAG
CGCTGGGCCTGCCCAGCCTTTGTAATGTCTTGTCAAGAGTAGATTGAGAACTGTGACATGATGTTAGGAAATGGAGATT
TACAAGCTTACTGAAGAATATAACTGAGGCATTAGGAGTGCTTTTCTGATCGGATTAATGTTCAGTTTTATTTTCAATT
TTATCAAGTGAGTGTTAATGAGAAATTTAGTTGGCTCCAGTAAAATCATTATTTTTTTCCTATGAAACATATGAAACCT
AAAATAATAGTCTAATTGTTTCATTTTTATGGCTTCGAAATTCTAGACAAAAAAAAAATTCTAGACAATGTAAATATTT
AACCAGTAAATATTTTGATGCATTAAATCGCAAAATATCTTTTATAATTGCTGCATCTCTCTTCCAAATAACTAGAACC
CAATTCCCATTTTCACTTTTCTCACATAAACATGAAACCATTTCTTATAGTCTGTAAACATTTCTACATAAGTGGCTAG
AACATATACTGCCTTATGTTTAATTGCATGAGACCCGAACTTATTTAGTGAGTATTTTGAAAAGCAGTTAAAGAAAAAA
GATGATGAAACATTAATGGCTCCCTTCCTCCAAGTAGAAGATAAGAGTAATATACGGTCATGGAGTTCCTTTTTAAGGG
GATGTATTAGTTTTCTATTTCTGCATATAAAGTCACCCCAAAGCTTTGTGGCTTAAAACAATAATATTTTATTCTCTCA
TGGTTTCTGTGAGTCAAGAAATTGAACAAGGTAGGGTAGAGATAGCTGGTCTCTTGTTATGTAATGTCTAAGGCCTTAG
CTGGAAGACTCTAAAGGTTGAGGGCTGAAATCATCTGAAAAGTTGTTCATGTCTGGTGGTTGATGCTGGCTGTGGGCTA
GAGACTTCAGTTCATCTCCATGAGTTCTCTCCTTGAGGGTTAGTTTGAACTTCCTCATAGCATAATAGCTGATATCCAA
GGGCAAGCATCCCCAGAGAGAGTAAGAACCTGTTAGAATCTGTGTCCTTTTTATGCTTTGGCTTGGAAACCACAGAGCA
TCACTTCAACCACACTTCATGGGTTGGATCAACAACAAGTATCCTTCAATATTCAAAGGAAAAGAACGTAAATCCAACT
CATAGATTCTACCAGTCACAACGTAAAGTAACATAAGAAGATCTGTATATTAATCTTTGGAAAATATAATATGCTATGG
GAGGAGTGGACACAGGTTTAGCTAATGCCAGGTTAGGGTTTTATTAAGTGGGACATGAAAGCTTAGAGCTTGAAGTGAC
GAGAAAGAGGGAGCAGGGTTGGATGGGGTGAGAATTTTACGGACTGTGGATATAAAGGGGCTGCATTAGTCAGTTTTCA
CACTGCTATAAAGACATACCTGAGACTGGGTAATTTATAAAGAAAAGAGGGTTAATTGACACAGTTCCACAGACCTTGG
GAGGCCTCAGGAAACTTACAATCATGGAGGAAGGGGAAGAGGCATGTCTTACATGGTGGCAGGTGAGAGGAAAAAGAGT
GAAGAGTGAAGGGGGAAGAGCCCCTTAGAAAACTATCAGATCTCTTTAGAATTCACTCACTATCACAAGAGCCGGATGG
GGGAAACTGCCCCCATGATCCAGTTACTTCTACCTGGTCTTTCCCTTGACATGAAGGGGTTATGGGGATTATAATTTAA
GATGAGATTTGGGTAGGGGCACAAAGCCTAATCATATCAGGGACAGAGAAAGGAGAAGTGAGGAGGCTGACATTATGAG
ATGGATTTTGAGGGAATAACAGAGATGTTTAACGGGGATATTTATGCAGCTTTGCTGTGTGGAATGTGAGGTAAAATTG
TTTCTCTATATTTTTATAATCTTTAGAGGAAACATCCCACTGGGTTGTAGAGTTGGATCTATTTTTGGACAAAATACAT
TAAGTTGCTGAATATGGCTTCTATGTAGAGGGAGGGAAAAAGTAGAGGCCTACTAAATCTAGGTTACATCTGTTACATC
TGCTTTCAGAAAAACTTAGTAATAAATGTGGCTGTCATGTTAACGTTTGGTGGTTCCTAAATGTCATTGCAAAGACTGA
AGCCAGTCCATGGTAAAATTTTCATTGGCAAGCTCTGAAATCAGAAATTAGACATCATGAATCTTTCACAAAGCTAAAT
TTGTTCAATTAAATGAAATGATCTTTATTGTGAGTTTATATCCTTCCAAACTTTTTAGTTTTAAAATGATCTTTTTTAA
GAGGAAATGATGGTGACAGTAGATAGTACTTGTGTTTTGGATTTTTAACTGTCCATATTTGGAAAAGTAAAAAGTTACT
GACCACCATACTTTAGTTTCTAAAACACTGGAGTGCAATCTCTAAATTGCAATGTGTTTGGGGAAAAAAATTCAATCCC
TTTGCATTAGGTATTTTTATTGACATTAGATATAAGAGAATAGTATAAATTTACCTAAATACACAGAAAAATAATCTTT
ACTCTTTATAATCCCAAAGAATATTCCTTAGTTCTTTTTTCTTCTATTTACTATCAATATCTATCACAAAAGCTGATA
TTACATGAAAATATTAATATAAATGTTACAACATTATCTTTCTTACGCAGGTTTGTTGTGAGGATTAAATAAATTAATA
TTTATGAAGAACTTTGAATCATGCCTAGCATGTAGTATGGACTCAAATATTGCTAATAATATTGACAATTTTTTTGAA

Fig. 9.141

ATTGCTCTTCTTCTGTAACACTCAATTTATGCCATTGGCATAAATGTTTTGAGCTAGACAAGATATTGCTCTATTCAGA
GTTGCCCTGGAATAACTTGTTTCTTTAATCATAACTGGTACTTTTTTAACCTATTTAAGCTTTAAATTATCCAGAAATA
AAACGAGGAAAAAAGAAGAAATTAAAAACAGTAATAAAACCAATTTCTCAGAAAGCCAAAAGATAACAACAAAATAAAC
TTTAACTACAAAAGTCTTTTTAGAGAAGAAATATTCTTATCCACCTCATAGCCTAGACTCAGTCAAGGGAAAGGGCAGC
CAAGAATATCTTAAGTGATATCCTGGGCTTTGTTTTCTTGATTCAAGTAGTGTTCACATTATTATAATTATATATTCTT
TTATCTGTATATCTGTCTATTCATCCATTTATTCATTTGACAAAAATTGAGTATCTGTGTTTGAGAGACACAAAGATAA
ATAAGATATCCACATCCCTCCAGGAAAATGTAGCATCTATTTTATAATACTTATGAATATTACTGAAGATCTAATTATA
AAATAAATTAAATCATTTATCAAATATAAATTCTATTAATATGAGTTTATATGACCACCTATAATGATAACAAGTATGA
GTTCCCTCTTTTACTTTTATCTGGCCTTCCCTCAAAAGATAGAGCTAACTACCTAGCTACTGGGCTGAAAATACTGAGT
TATTAGCCTTTGTGCATAGTAAGCTGGTGGTCTTAGATCAGAGGTATATGGCTTTTTTCCAAAGACACTGTGAGATACG
CAGAACAAAAATCAGAAAACTATAATCTTTTAAATGAATCATGAAGTACCAAAAATGTAAAGATCTCTTAATAAAAATA
ACATTTAGGATAGATACCATCAGACCAGTTCTGTACTCTGCCTATACTATTTTGAAAATCTTCCTTAAAGAAGCTTTAA
CTCTGATGTTTGAAGTGGCTCATACAATGAAAATAGGTTTAAATGCTTATTAATCACATGTAAATTAAACACATAACTT
TTGTGTTATAATCATAAAGTGGATTTGCTTTGTTTCATGTTTCTTCTTAAAATAATATAAAGCAAATAAATGAAACAAA
AATGGAGGTGTCCTCTGCTAGGTCTACAGTTATATAAGGAAAACCGGAAAGATAACATAAAAATCTCCCTAAATCAGGT
CTATACAGAAACAGATTTGCTGGATTTAGAGAGTAGATAATGCATGTAATCTCAAATATAAAATATAGCAGGTGACTTT
TTATGGGGAAGTTTTTTCTTAATGTTGATAGTAACATATCTGTACTTGACATTAATTAATCCATATCGTAAAGATTTGA
ACCAGAGAATCAGGCCCACTTGGTCATAGAGGCAGTCAAGGAATGGGCTCTCCACTACAATTTGATGTGAATTGTCTAC
TTATCATGTCTCATAGTTAAACCAGATAGTTTGGTAGATTCTTTATCACGTGTGTTTCTAATACAACCAGGAAAACCTA
TCGTATATTCTTTTTTTTTTTTTTTTTTTTTGTGAGACGGAGTCTTGCTTTGTCGCCCAGGCTGGAGTGCGGTGGCACG
ATCTCGGCTTACTGCAAGCTCCGCCTCCCAGGTTCACGCCATTCTCCTGTCTCAACCTCCTGAGTAGCTGGGAATACAG
GCTTCCGCCACCATGCCCGGCTAATTATTTTTGTATTTTTAGTAGCGACGGGGTTTCACCGTGATAGCCAGGATGGTCT
CGATTTCCTGACCTCGTGATCCACCCGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGCGCCCAGCC
TATCATATATTCTTACATTCTCTCTCACACAAATGTGCATGCGCACACACACACATGCACACATATACATCATTCTGAC
ACTGCCTTAACTTTCAGAATACAAGGTTGAGTCCTCTGCCACATACTAGCAGTATAATCCTGGATGAGTTACTTAAACT
TACTTTGCTTCAGTTTGAGGATGAAATGAGAGAATATGTGTAAGACATCTGGCACACATAGTGAGCATTCAATAAATGT
TAACTATAAGTAGGTGACCAGTTGGGGCCCAAGGAGATTGTAACTTGCTTAAGGTCATTAAGGTAGTTCGTGGCTAAGT
CAGAATTAGAATCTACATAATGATTCTCAATTCAACCTCCTTTATACTAAGTTATCTCACTAATTGGCAGCTCTTTCCT
GTGTTAACTTTCTGTACATGAAGGGTTTGCCTTCCCAAGTAAGTTGTAAGCATCTCAAAGGTTAAAAGCATTGTGAGTG
ATATCTTCATCAACCATAGGTTCTAATAGAGACTTCTTGCTATTTGTAGGGGTTCAGCATTTATTTGTTAATTATGAGC
TTTCAACTTCACAATAGTTAACCTGAAATTGTTTTATTCATCCCATTTTTCTCATTCTGTCTTCAGTAGTTCTGTATAT
AAGAACAGCAAGCCATTATCATTCTCAGCATAAAATTAGAATTGCACTCTGCACAACTACCATCCTCTCCCTCTGTAAG
TCCTCAGAGAAAATCATACAATTTTCTACTATATTTCTGCAGTATGAAGAAAATAATTTAATATACCTATGCTTTGGTT
TCTCCATATACAGAACTTATATATGGCATTACTCAATCACCAAAGAATTCCATTATAATTTAGCTTATTGTTATGTAAA
TTCAGGCATAACCCAGGCCACAATATGATCCCAAGAATATAACAAGTATCCATAGGGAAAACCTGGTAGAATAACTCAA
GAGTGGGAATTATTTTTAGCTTTGGATGACTTTTATATAAAGGAGCTCCACTCACAATACATTAGTGGCACTATTAACT
ACACTCGCTAGTAAGCTAATATTTGAGGTCCATTTTTTACATCTCTTTGAGAGTATATCAGTATATCAAGCATTACAAA
TTACTACCTTGATTGCCTTTGGAGCTACTCTTTTTTTGAGACAGAGTCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGG
CACCATCTCAGCTCACTGCAACCTCCACCTCTTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGATT
ATAGGCGTGCACCACCATGCTCAGCTAATTTTTGTATTTTTAGTAGAGACAGGGTGTCACTATGTTGGTCAGGCTGTTC
TTGAACTTCTGACCTTGTGATCCACCTGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCATGGGCCACCGTGCCTGGC
CCTTAAGAGCCAACCTAGCATATCCTTGTAAATCAGTTGCCTAAACAAGCTTCCTCTTAAATATGCCTTTGAAAAATAT
AAATTCCTCTCTATCAGTATCTACATTTCACTTTGAAGATCTTATCGGCTTTCAGCAGCAGGTGTGCATATCCTACAAG
TTTCAGTTTTCTCTTGATGCTCAGGATGAACTAAACATCTAGACAAGGGAGCATCTGGGAAGTCTGACTAACTGGACTA
CTTGGACTGGTTTGTCCTCACAAAATGTAAGACTTACAATCTGTAGGCTGTTACCTAGCTCCTGAGAGCTACCTCCCCC
GGGCCGCCCACACTAGATTTTTAGTCCTGAGCTGCATACCCAGGAATTCTCCTGTTTCCGTGAATCAGGAAGGATATGG
CAAGTTAAGAGAGAAGGAAAGAACCTGCTGAGCCTTGCCTTCCAAGGGATATCAGGAAGTTACTCAAAAGACGGCAAAG
TGCTCTCTACACAAAAGTGCTGGAAGAACTGCAGTTATATTCCCTTTAGGAAAGGAAACTTTAAGATGATTTGGAAATA
GCCAAATGTAATCACATAACAACCAATTTTGAAGTTTGCTGGCATGCAACACTCCTTTAGGAATTCTTGGTTTCCAGCT
TGGTCTCATTGGCAACAAATAGAATTTCCTAAGCCTTATTAGGAGCCTGACATTTTGTTTGAGAATCAAAACTTTTCTG
TTTGAAAACTAGAGCCAAACTCAGTTATATAAAAACAGGGATGTAAGAGAAAGAGCAAACAAGGAAAGCTATTATGTTA
TATGTGTGCAGAACATAATAGTTTGAAGAGGGAGACTTCTCGATGGACCAGAATAAATACTAGAATGTAATACACAACT
CGGTTATACAAGGTAAAAATGAGTTACTGGCCCTTCAGGATGGGTATCATGATAGCTCATTAATTTAAATAACTCCTAA
TATGCGTGTAGCAGTTTATCAGTTAGAGAGTGCTTTACATGGGTTGCTTTTCACAATAGATAACTTAGGGCAAGTGAAG
GCCTGGGTCTGAAAACATATTCTGCAAAATAAGCCCCTCACTGTTAAAACCTGGCAAATGCTAAGGACTCCACAGCTAG
AGCAAATGGCTTCTATAGTTGAATAATCTTTCAATAAAGTTAGAAAAATGGGTGTCCTTCTTCAATGCATAGCATGTTG
GGAACCCAGGATACTTTAGAAAGTCTCTTGGTCCAGCACTCCGACTTGTGAAAGACAAATATTGTCATACAATGCTTTG
GCTGATCTCTTATTTCTTGTCAACCTAAGGTACAGTGGGTATTAAACTCTTTTAGCTTCCTGAAGACAAACTAATTCCC
GACCTCCCTGTAATAATTGCTGAACATGGGAAGTTTTGGGGTCTGAGTTTTAATTCCAAGTAATTCATTATGTCTGTCA
TTGTCTGTGGTAGGTTGCTTGCCCACCACTTTGCCAGTATCATTATCTGTGACTTGAGGCAAATGGTAAGGACAGCTTG
TCTGAGTCTCAGCACTTGGGTGGCAGATGTGACAGAGATAGATAAATTGGCCAGAGTGAGTATTTTAAACCAGAATACT

Fig. 9.142

GCCCCCAAGCCCAGTATGGGACCATCTACAGTATGGAAGGCAGCTCAGACATAGGTCAGTTTGTTCAGGAGACCACACA
TTATGATCTGTTGAGCTGTTCATCATTTTCACTTGAAAATGAGGGGTGGCTGTTTTTAGGCTGTCAGCCTCAGATTTGA
ATTCTATAGTGATTAGGTGGTGAAATGGCTGCTCTCTGCAGACTGCTCAGGGGCTGTTAGAGCTACACAATTGCCCTAA
AATCAACAGGAGCAAATAGCCTCACCAAACCAGCCTTGAGTCATTCCTTTAAGTGAGGGTGATTAGGAGGGTCAGCTAT
TTTTAAGAAAGAAATTCAATAATCAGTCTGTCCAGAGACTCAAAATTATTTATCATGGCATTTTCCAATGTCACCTTTC
CTCACCATCACTTTGTTGGCATTAGGCTTTGAGACATGGTTCTCACCAGCAAGATGGTTATTTTTATGTCTTATCAAGG
TCTCTAACAGGTCCTATGACACGCAAATGTTAGAAAGGAGAATAAAGCAACAATTGAGTAAAGCAATAGTACAGTGGGA
AGAGAGACAGGAAGATGATGTTGCCATGTTTTAGTTTAATATAAATTGTTAATATCTTTGTCTCAGTCACTGTATAGAA
ATAAAATATTTTCAGATTAAAAGATCCTAGATCTTCATTGAATCCTACCTCTCTTAACCTCAGCCCTTTTGGAAAACAG
CACAAACTCCAAACTGTAATTCAAGCTCTAAAATAAAAGGCTGGGCTGGATCCAAAGTGTTTTCAATATTTTTCTGGTA
GATTTTTACTGGTTTTTCATGAAAAGCACTTAATTCAAATATTATTCTTCCATCTTTTAATGTTTTAGTCAACAGTAAA
TGATACTCTCTTCTGATATACTCCTCTCAAAGTGGTAGAAGAGTTTGTGGCAAATTGCCATTTCAACCATTTATTCTGC
TCCAATAATGCAGTATTGAATACACTGAAGCACGGAAAAATTAACTAAACTACTTTTATGCACTTTCAAAAGAAGCAAC
AGAAAAACTTGGCAAAGTAATAATAGTGAAATTTTATTGCTTCTCAATAGATTAATATACTTAATAATATCCTAGAAAA
TGCTGCACTTTGAAATTTTAACATGTAACAGTGTATATCTTAAATTAAAAATAACTGTATAGTCCAGGGTGGTTATTTA
TACTTTATATAGTCTATATTCTTTGTGAGATTTGGGTTTAAACACATCAGAGTTTAAATTCTGCGAAGACTGCAGAGTA
AAGAAGATTAAGATGGAGGGAAGGAGGAAGAGCAGGAAGAGGGAAAGTAGGTATAGAGGAAGAAGAGAAAAGGAGATAG
TAGAAAGGGGAAAGGAAGATGGCAGGGAGGAAGGAGAAATACCTCAAGTCCATGAGGGGTTAGTGCTGAAGGATACCTT
CATCATTAAGTAAAGGGTGAATTGCACTGGGTTGTTTAAAAGCATGCCCAGATACTGCTGGGTGCGGTGGCTCACGCCT
GTAATCCCAGCACTTTGGGAGGCCAAGGTGGGCAGATCATGAGGTCAGGAGATCGAGACCATTGTGGCTAACACGGTGA
AACCCTGTCTCTACTAAAAATACAAAAAATTAGCCGGGCGTGGTGGTGGGGGCGTGTAATCCCAGCTACTCGGGAGGTG
AGGCAGGAGAATGGCGTCAACCCCGGAGGCGGAGCTTGCAGTTAGCCGAGATGGCGCCACTGCACTACAGACTGGGCGA
CAGAGCGAGACTCCGTCTCAAAACAACAAACAAACAAACGAACAAAAACAAAAAAAAAGCATGCCCAGATACAATCCTA
AAGTATGCCCAGATACAATCCTAATGCAAAATTTTATCAGATGGAAAAGTATCAAAAGCTGGAATAAATAGAAAAAGGA
GTTCATGAAATGTATTCAAAGAAATTTTAAAAATAGCTCAGGTACAGAATCTGTTAAAGCAACAAAGCAGACACATGAC
TCTTCTTAATCTTCCACACTTGACTCCACGGCATTAAGTTAACACTTCCTTAGTCTCCTCTGAGTTGAGACAAATTTCC
TGAAAGGAAGGTTGACATTCCCTGGACACTTTAAGGATCTGTTTGTGCCTCATGGGTATAGGTTGTAAAAGTTCTTTGC
ATAGATATGTCAGCATTTTAGTGCATTGTTTGGCTCCAAGTGACCTTTCCTCCCTGCATTTCCTCATTTGCCATTCATC
TTCTTGCTTCCCTTCGTCTGCCATAATAGTCCCTGGGGTATAGTATAAGTGCTTCTAGGGCACTCCTCTAACTGCACGG
TTATTGTTACTGCACAATTAAAGGACTTAGATATTGAAAAATGGTAGTGTTTGGAATTCTGCAATCTCATTCCTTAGGG
GCAGGGAACAATTGGAACACCTAAAAAAGGGTCAGAGTCCAGAACCAGATTCAGGAGAGAGTTCAGCTTTCAATTGGGT
TGGTCCATTTTTCAGTGCTGCCCGCACGAGCTGTCAGTTGCTGGAACTGCAGAGTATTTCAAGGAAAGGCGCGGCTAAG
CAGAGGTGAAATCTTTAGACAGATGAGTCTCAAAGAGGAAATTATGCAGAAGCCAAATGGCTACAAATGGTACTGAGGA
TTGAAACCTAAACTATAAGTGAAGGTCTCTTCCCTAAATGATACACTCAGACTTAACAATAAGCTAATAAGGTGGTTCA
ATAAAGAAAATGTGGGTCTGATGGAAGAGTAGAGAGTTTAGAAGGTGAGTAAGAGATATCTATGATATTAGCTTGGGTG
TGTTTTTGGTATTGATGCCATTGTGTTGGGAGTACAGCAGAAGGACAAAGAACTCCTTTAGCAACTTGGCCTGCAGTCA
AATAGGCCAACATTGGAATCTGAGCTCCACTGCCTTCTTCACCTGGGACTAATCACTTACCCTCTCAGTCTCCTCATCT
GTAAAAAAAAAGGATAATAATAATAATAATTGTTACCTTTGGAAAATTACACCTTTCTCTTCTGTACCTTTAACCTTT
CTCTCAACTAGATACTTTCCATGAGACTCAAAATACATTCAAGTGTCTTCTGCATTAAAAACAAACAAAACAAAAACCT
CACCTTCAACCACTTATTTCCCTATGTTAGGGTTTCTCTTGACGTTTGGGGCTAGATAATTCTTTACTTTGGGGCTGTT
CTGTGCGTTTTGGGATATTTAGCAGCATTCTTTACCCATGAAAATATTGTGTCCCTCGCCCCACAAGTTGTGGCAATCA
AAGTTGTCTCTAGACATTGCCAAATATCTCCTGGAAAGATGCCCACCCCCCACCCCAGTTAGGAACCACTATTCTAATG
ACTGCCTCATCTCTTGTCTCCCTTGCAAAGCCACACTTGCCCAGTTTTGCCTATTCTCTCTAGCTATATTCCTCACTTC
CCTATCACAGCCGATCCTATTCTAGTCTGTCTCTTGTTCCCATTTACCAATAAAATCATTTTTAGTAAGAAGAACAAT
AACCTGGATAGTTCTAAATGTAATGAATATTGCAATTCTTCTCTTCCTTGATTTCTCACAATTTGAAGTGTGTTCTTCT
CCTGGCTCCTCTGACACTATTCTCTCTCGGCTTGATCTGTGAAGCCTGGGTCTCCTGGAATAGCTGCAGCCTTTCTCTC
CACTTTCTTACCATATTCTCTCACTGTGTCCAGGACACTAGCTCAGACTTTTTCAAATGCTGATTAAAGGGCTTCCATG
CTGACAGAGGGCAAACCTCACAGAGCAAGCTTTTCTTAAGCTTTTGCTTATATCACATTTGCTAGCACTCTCTTGGCCA
ATGCCCAGAGTCACATGGGAAGAGCCTACTGAAGGCAGAAATACAGAGAGAGAAGACTTTTGGCATAACATCTTGAGGG
CTTCCTTTAACCCACTCCCCAGTAAAACTAGTGAAAACTATGATCAAACAAATAAAAACTCCAAGCACTTAAATCCTCT
GGAAATGATCCTAAGGACAAATAGCAAATGAAGAAACATCTATTCAAGAACATTTATGAAAATTCAATAAGAAAGGCAA
GCCTGTGGTATTTAAACCAAGACTGCTCCCTCTCACCCCCTTCCAAGTTCAGGGAGATGGAGCTTCCATTCCAGGCTGG
TGCAATCAAGAACACAGAGCTCTCTCCCCTCCAGCTGGAAGGTTTCTTCCTGGAAGGAACAGAACTTCAGTGTTTCTCA
TCCTGGCCATAGTTACCCATTGCTAAGGCTAAGCTCTGGTGAATACAGTAGAGAGGTAGGGGCTTCCTCCCCTGCCAAA
TCCCCCATCATTGAATGGAGGGGATACCTTAGGCACTGCATGCTAAGAATACAGAGGCCTCATCATCCTTGCCTGGCCT
CCTGAGGTGGGGGTTCCACACCAGGAGAGATAAATATAGAAGATATTAGAGTGCTGCCACCTCCCAACTAAGCTAAGCT
CCTAGAGTGGGAGTTTCATGCAGTCATGCAGGAAGAACCTCTCCATTTTCTCCACCTCCATCTTGAGAAACATGGCTTA
GAGATTTTGCCTGGTGGTGGCGGGGGCAATAATCCATCATAAAATAAATATTCTTAATCTCTTCCCAAAGGGCATGGCT
TCATTTGCAACAAAGTATGGAAAAGTTCAAGCCTTAGAGTGCGCTCAAGAACAGTGGAAGCTATGGTGAAAGGCAATTG
GGAGGAGAGTCAAGATACAGGCTAAATTGCAGACTAGTTTGCAGGAGAGAACCAGAGAAATAACACAGCTGGGAGGAGC
CCTGACTTCGAACTATTTCTTCAAAGGAGACACAATTCGATTGTATTAGTGTGTTGAACAATATAAGGTTGTAAAGCAC

Fig. 9.143

TGTTGAAAATAACACAGCAATTGTTCACCAATTAGTGGAGTTGAACAGCTGAATGTGGTTAAGGAAAGAGTGAAGGACA
ATCACACGAACATCACTCTCATGCCGGCTGGGCTGTCTGTGGACATACCCAAAGATGTACCTCCCTGATAGCAAACTCA
GTGACTTAACTGAGGGAAATTAACTCACCTGACTGTGAAGGAAATATACTTATTAAAATAATCCAGCCCCTCACTAAAC
AACCAAAGAATAATAGCAAGCCCTGGGTGGTGGTAGGGGGAGTAAGAAGAGTTGCTACAGTATATTATCTGCAATATCC
ACTTTCCAACCAAAGATCACAAAGCATGGAAAGAAACAAAAAATATAACCCATACACAGGATAAAAGAACCAGATGGCA
GAAACTATGGGTGAGAGGGACCCAGATGTTGGATTTAATAGAGAGATGGAGAGGAGAATGAATGCAGCCAGTGTGCAAT
GTGTCATGTCCTCTAAATGTTCAAGTCCCTCAAGTCATAGATCCACCTATTTTTCTCAAGTTAATATCTCTACACCTA
GTTTTAATTCCCTGTCATGTATACAGGACTCACACATTTTATCTTCAACTTAGGCCTTCCCTCTGAGCTCCGGACCTGT
GTATCATTCAGCCTTTTTGAAATCTCTATCCATATGTCTCAAAGGCACTTTTGATTAAATACTACCAAAAATTAACTCC
CTCTATCTCCCAGTGTTCTCTATTTCAGTGAATGATACCATCAAACATCTACTTTCAAAATCAAAACTCTGAGATAAAT
CTCTAACAGCTCCCTGCTTATCACCCCACCCCATCATATTGAAAACCAAACCCATTTAAATACCTTTCGTTTGTGTCCT
CCTCTCTCTACCTCCACCACCAGTACTGTAGTGTAATCTGCCATCATCTCTCACATGGATTACTGCACAAGTCTCCTAT
CTGGTGCCCAAATTAGGAGCACCCTCCTAACTGGTATCCAATCTAATCTCTACACTGTAGCCAGAAAAAATCCTTTGAA
ATTCAAATCTAATCATGGTATGTGCCTCCCCCTTCTTCTATGGAGACCATAGGAAAGAAACCGAAACTCCTGTGGTGCT
TGAGTTGATGCTAGTAACCTCTAAACCTCATTTCATGCCTGGATCTGTCACTTCCTGAAGCTCCATGATAAAGCACAGC
CTCCTCACCCTCCAAGTGCGGGGGTTCTCTAGTTGTCTCTTCCAGGTGCCACCAGAGGGACTTCTCTCATAAAAGGCCT
GTGCACCCTATGCTCTTTCTCTCTCTGTTATGGACTTCCTTCCAGAGAGCTGGTCCCCATTCCTTGATATGGGACTGTC
CACTTGTATGAGTAATAAAAATCCTTCTCTGATCATACCAAAGAATTGGTGTCATGAGTTTTTATATTAGAAGCTAAAC
TTGAGAGGGAACTTCCCCATGTCACAGTGAAGGTGTGATGATACCCTCTTTCTACCATCTTTAAATTCTTCCGTCGCTT
CCATTCCATTTTCTCTTAGGATAAAGTTCACAATCCTTAGGTTGGCCTACAAGGTCCTCTACAGTTAGGTACCCCCGTC
TGCTTTCCTTCCTTCCTTCACATTAGTTATGCTCCCCACTGCCTGAAAACATGCAGACCTGCTGCATCCTCTACCTGAA
ATACTCTTCTCCTCACCCCTGCCAGACTTTACCTAATTTGCCCTTCGTTTGTCTTTGTAACACCGCTCAGAAATCTCTT
CCTCAGAAAGGCCTTCTCTGACACCTCAGCACAGTCCTCCTCACGAGGTCAGATGTATTTTTTCTTCAAGGCACTGACT
TTGGTTTAAAATTTGTATTTATTCATGTAATTATTTGGAGTGCATTTATCTTCCTCACTAGATATAATCACCATTAGCT
CAAGGGCTTTATATGTTTTGCTTGCCATTGTGTCCTCAGTGCCTAGGCCATTCACTGACCCACAGTAGGTGCTCTGATA
AATATTTGTTGAGTGTAGAATAAATGAAGACCCTTAGAAGCATAAAATATATAATCTCAAAGCAGAAGATACTTTAGTT
AGAATAAGTTAGGTTCAACTATATTAACACTCCTTACTACACACACACATAGCTACACTCATCAATTTTGGTGGCTTAC
ACCAAAAAGGCTTATTTCTTGTGCACACTGCATTCTTGTGCTTTAACAGGATACTCCGCCCTACCTCATCTTTATTACA
GACCTTGGCTGACGGAGGCTACCACTTGGAATATTGTCTATTTTCAAAGTCCAGCAGAAGAGAAGTTAAGAAGGGTTTC
ACTCTGGCAATTAAATATTCCAGCTAGGAAATGACATACTTTATCTTCATATACAATCCATTGGCCATAACTAGTCTCA
TGGTCCTGCCCATTTGTAAAGGGGAAATAGGTAATCATCTCATGCATTGAGGAGGAAAGAAGAATTAGATACATGTGAC
CAGTAGAAGTCTCCTTACTGACATTTTAATGTAGAGCTGTATGTGATTAAAGTTAAAATTGAATCTGAAGGGCTGACAG
AAAAATTCAAGAGGATATGATATTTAATAATTGAACGAGGCTGAAAGATGAAATTTGGACAGATTGAATGGGTAGGCCT
TGCTAGCAGGAAAGACAAAATAAACATAATCAAGAAGTATGTATGAACGTGTGCCCAGGGCAGTGAGGAGTGATCAGCC
TCCTTGAAGTGGAGGATGTGTGTCAAGGAACCAGAGGAGATGATTAGAGTGGCAGACCTGATTATTAGCATATCCATGC
TTCTGTCTGAAGCCTTTTTGGCCTATAATGTAGAAATATCCTTGGAGTAAGCAGTTCAGCATATGGTTTTAGACATATA
GGTCATCTTGGCTGGATTGCATATTCTTCATTTTTAAAATTCCAGGCTGTATTGGTTGATATGCAGTCCAGAAAGAGCT
GGATCTGACTTAAGAAAATAAAAACTGCTTTAATCCCTCTTTTCAGCCCATTGTCTATCCATTAGCAGGTAAACACCAG
TGTCCCTGCAAGTGTGTGAACTGAGCTTCCTTAATTTCACCTTTAATTGGCACTTCTAGTGACTTAACTGAGTGAAGAG
ACCCTTAGCAATGATACAAAGTGAAGGATGGTATAGAATAATAGGTTTCTGAAAACCTGAATGCAATTGAAGGGTGCT
ATTTAATAAATCTGTCCCTAGAAGCTAATAGCACGTAGTCAATACAATTTAGCCTATTTTCTCCCATGTTACATTTGTT
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AGATTGGAATAAAAGCACGTTGTTAAACAAGAAATCACAATAAAGTATTGAGTAGAGAGAAACCGTTAATGGAGACAGC
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CAGCCTGCCATGATTCAAATTGAAACTCCATCATTCACCACTGTGTGACCTTGAGAAAGTTATGTAATCATTCTTGGAT
AGTGATTCTTACTGCTATGGACAGATTTGTGTTCCCCCCAAATTCAAATGTTGAGGCAACTGTGTGAGGAGAGAGGGCC
TTTAGGAGGTAAAGTTAAATGAAGTCATAAATGTAGGGTCTTAATTCAATAGGATTAGTGGCCTTATAAGAAGGGGAAG
AGTTTTCTCTTTTTCTTTCTCTACTTGCCTGCACCAGGGAAAGTCCTTGTGAGGACACAGTGAGAAGGTAGCTATCTGC
AAACTGGAAAAGAGTCTTCACCAGAACCTGACCATGCTGACACACAGATCTCAGACTTGCAGCCTCTAGAACTGTGAGA
AAATAAATGTTGTTTAACTACCCATTCTATGGTATTTTGTTATGACAACCTAAGCTGACTAATACACTCACCTATAAAG
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GACAGACCTGGTTTGGATTTCAGTTCCACCTCTTGTAAACTCTATTACCTTGAGCCAGTGACTAATGTATCTAAGCCTC
CATTTTCCTATCTGTAAATGGGGATGATAACTAGTGCTGCTTGTCTCTTCAGGTTGTTGTGAGGATTAAAGGAGATATG
CATGACAATTCATCTGCCAGGTAGTAAGCATTCCAAATATGCTATTTACTGCCATCATTAGAGGTTTGCTGAGCTTCCT
CTTTTGCATTAAGTAAGAGACTATTCTCTCCAGAAAACTTTGAACTACATGATGGAGGAACAAATAATAGCAGTTTCTC
CTCAACCTTGGAACTCTAAAAATGTTTTTTCTAAGCCATTCTTATCTTTATTTTGTCATTAAAAGATACATGCATTGTG
CATTTTGCTTTTATTTAATATATGCCATGAGTGTCTTTCTCCCTATCATGATGTCAATGTTACATTACAGATTCTAAGG
AGCAGGGGCCATATCCCTTAAACATGATTTATTTAAAATAACAATATAGGATTGGATGTGACTACTGCTTTTGCAATGA
AACTGAAAGATGGGAGAGTGAGATTTTTCTCACAGCTATGGAGTGGCAGACCTGAGCACTAAAATCCAGTCTCAGAACC
CAGTTATTATCTCACAATGTGAAGGCAGGAATCTATAGACAGATTATTGAACATCTCATGTATCATATCATGTATATCA

Fig. 9.144

TTAAGCTTATATGTATGACAAAATAGTATTTTGTGCAGCAGTGCTTCTCAAACATTAATAAATGAATCACCTGAGGATC
ACATTAAAATTCAGATGCTGATCAGGGAGTCTAGAATGGGACTGAAGTGCTGCATTTCTTTTCTTTTTTTTTAGACTTT
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AACTCGTCATTTAACATTAGGTATATCTCCTAATGCTATCCCTCCCCCTTCCCCCTACCCCACAACAGGCCCCGGTGTG
TAATGTTCCCCTTCCCGTGTCCATGTGTTCTCATTGTTCAATTCCCACCTATGAGTGAGAACATGCGGTGTTTGGTTTT
TTGTCCTTGCGATAGTTTGCTGAGAATGATGGTTTACACCGTTGGTGGGACTGTAAACTAGTTCAACCATCATGGAAGT
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AACCAACCCAAATGTCCACCAATGATAGACTGGATTAAGAAAATGTGGCACATATACACCATGGAATACTATGCAGCCA
TAAAAAATGATGAGTTCATGTCCTTTGTAGGGACATGGATGAAGTGCTGCATTTCTAACAAGCTCCTAAACGATGCTAA
ATCTGCTGGTCCTCAGACTACTCTTTAAGTAACAAGGATATAGTTGGTTTTAGCAATAGTGACTTAAAGATTTTTTGCT
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TTTTCAGTTTTTATCTTCCATAACACATTAAATCACCTCAACCTTCCTAAAAAGCTCTCCTTGTTTTCTGACTTTTAAC
TGTCTTGAGTCTCCATTTCTCAACCCCTAAGTCATGCCCAAATCCTGTTCTCTGACATTTTCTCATCTCTCTTACTTTC
TTCTCCTTGGGAACTCCCATCCACTGCCACATATTCAAACATTAAATTCAGCTCTCTATACACTTCTGCATCAGTGTCT
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TCAACATGTCAAAAACCAGAATTCATATACTTCTTACTGTTAGGCCCCAAGCCATCTGCCCACAACCACCAGGTTATAT
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GTCGTCTCTCCAACTTCAATATTTTTTTGTACCTATATCTTCCATTGCTTTTAAATATGTGGTTGACTTAAGTTTGCCT
GAATCCTGTTTCCAGAATGTGCCTGGAAACTCCCAACCTCCATGCCATTTCACTCTGAATCTAAAGATCTCGTACCAAT
CTTTGCTTATTCAAATGTTGCATATCTTTTAAGGCCTACACGAAATGCTACAACTTTTGTGGTATATTCTCTAATCCCT
TACCTGAAAGTGATTGGTCCCTCCTCTGCACTGCTATAATGCATATTCTTTGCTATTTAGAAGACAGCCCATGCTGCAC
TATATATTATAGATCTATGCAAATATCTGCCACTATCTGAAACTTCAAGGCTCCATCTCTTCTCCATTATTCCTCCAAA
CACCACTCACAGCAGGTTGTTGTCAGTAATAAAATTTTATTGAAAGTTTTGGGGATTATGCAGGGCAATTATAGCAGAA
GCAGGAATCAACTGGAATTAGAGTGATAGAACCACAGCCCTTAGACATGTATCAGACACTCCCTGACCAAGTCTGTCCA
TGGACACAGAACTCCTCACCTCCAGATACTTCCTCTTGCATCTCTTCTACCAGTATCATAACCCTCACAAAAATGACAA
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ACAAAAATTAGCCAGGTATGGTGGCCAGTGCCTGGAGGCTGGGGCAGGAGAATCGTTTGAGCCTGGGAGGCGGAAGTTG
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GCCCTGCTCTCAGTACAAGTTTAAAATGTCTGTTGAATGCTAAAAGATTACTCCATTGAGCTTTTTCAAACTTTAAAGT
GAGTATAGTGTTTCACTGTAGGATTCCAAAAGCTGTTTGATGCTATGATTTCTTTCTCAACATCATGTTTACTCTGAAG
ACATTTCCATAGTGTTCTACCCTTAATTGAACAGAGATAGGAAATCACGACTTTAAAACTTTCAGCGTTAAGAGTAAAT
GACACATTAGTTTAGAGACATATCAATAATTATGGAAGTATCTTCTCAAACTGTAATGTTTTCCTCTGCCTTAGTGCTA
GCAATCAAATCCACTGAATTAATCTGAGCAGGGTCAGGACTTTGAACCTGAGGAAAATCACTTGAATTTGAGGCATTAA
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CTCAAAACTTCTGAGTCCCATAGTGTTTTGGTATGGCTCCAGAAGCCTGTTGCTGCCCCAGAAAAGGGAGATTTCACCA
TTTCTAAAGGGTTAGCTGCTCCCTGGGGATGACAGATAGGTGGCAAAAATTGGAATGTAGAAATTTTCCTTATGTTCTA
AAATTGCACAGAAATTTTCTAGGGAAATATTCTTTATAGATTTCCCAATTTGTTGACTAATCTCTTCATCTGAAATGT
TTCCCTCCATGTATGAATTTTCTCTCTGTCTTTCTAAGTCCAGTGTAGAATCGATTTGGTATCTACCGACTTTCCAGAT
TCCTCCAAGTTGGGATAAATCATCATTTCCTCCTCTGTGTTCCTAGTGCATAGAAATAAAATCATTTATCACAATCTTT
GGTTACTGATGATGGTGGGGAGGTCTTTACAGTGTGATGGCTTGAAGTACAAAGTACAAACTTGAAAGTCAGATTACCA
CTTACTTTGGACCTTAGGCAGGTTACTTAACCCCACTCTGCCTCAGTTTCCTCACCTGAGGACTTAATAATAGTAGCTA
AGCAAATGAACTTACTAATAGTAGCTACTTTATGATTTTTATTAGGATTAAATGTAATGGTGCATATGAAATTAGTAAA
CAAGAGTTGCAAAGTAGAAAACTGTCAGTGAATGTCAGCTCTCTCTATTATCCCTCAGAGACTCCTCCTGCCACTTTAG
GTAGAAAGCTCCTTAATAATTGTGACCATAACATGTTTATTTCTTTGTTGGTATAGTCAGTGCTCAATACATTATCTGT
TGAGTTGAACTGCATTTTTGACAGGAGACAACTTAAGTTATAAAAATCCTATTTTCTATTTATACTATCATAAAAGTCG
TGATGGCTATGCTTTTAACACTTGACCTACCTGAATGTGGATGGTTTCTAAAAGTAAAATACCTTTTAATGCTGTTTAG
AGTGTATGGCAGGATCAGAAAGGCATATGTGCCATGGCTTGAATATTTGTCTTCTCTAAAACTCATGTTAAGATTTAAT
CCATGGCCGCGCCCCACAGTGGCTCAGGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCGGGCAGATTACGAGGTCAG
GAGATCAAGACCATCCTGGCTAACACGGTGAAACCCCATCTCTGCTAAAATCACAAAAAATTAGCCGGGTATGGTGGCA
GGTGCCTGTAGTCCTAGCTACTCAGGAGGCTGAGGCAGGAGAATGGTGTGAACCTGGGAGGCGGAGCTTGCAGTGAGCT
GAGATTGCACCACTGCACTCCAGCCTGGGCGACAGAGTGAGACTCCGTCTCAAAAAAGAAAAAAAAAAAAAAAAAAAGAA

Fig. 9.145

GAAGAAGAAAAGTGTCAGTATAGAGAAGTGAGACCTTTAAGAGGTGATTGGGTCATGAGGGTTCTGCTCTCAAGAATAG
ATTAATTGATTTCTGGATTAATAGGTTTTCATGGGATTGGGACTGGAAGGAGAGGAAGAGAGACCTGAGCTGGCATGCT
CAGTCCCCTTGCCATGTGAAACCTTGTGCCAACTTTGGACTCTGTGGAGGGTCCCCACCAGCAAGAAGGTGCTCACCAG
ATGCAGCCCCTTGACCTTAGATTTCTTAGCCTCCGTAACTGTAAGAAAGTTTCAGGTATTCTGTTATAAGCAACAGAAA
ATGGACTAGGCAGCATGTAAACCAAATTAATCAACATACACAAATTTTTGTAGCACTATTTTACTCTTTTATATAACAA
ATAAAGCCTTAAAACAAATACTATTTGAAAGAAACTTACATGAAATGGTCATAAGCATAATTTAAACTTTAAAATTAC
ATATGTAAAGTTTTCATTGTCCAAACATGTTGATAGACAAAATGGAAAAGATAAATAGTTTGTACAGTTCTCTCTTCTT
GAAAAGTATTGCTTTGATTAAAATTCATATTGTCCCAACATTGTTTAATTCATAAATAGTAAAATAAATATGGAACATT
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ATATTTTTATTACAATCACTGTAATCCTGAATATTTTTTTCTAGCTTGAAGCCTAAAATTACCAGTACTTTAATATACA
AGATGAAAGTTTGTTTACTCATACCACTGCATATTATTGTTTGAAACAATCATTTCTGGCAATAGTCATACCTCTGCGT
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GGAGACTTTAGGAAAGAGTCCTTTCCTTGCCTCTCTCCTTGCTTCTGTTGATTCCAGGCATTCCTTAACTTGTGGCATC
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CCGGTTTTTTTTTTTTTTTTTTTTTTGGAGACGGAGTCTCGCTCTGTTGCCCAGACTGGAAGTGCAGTGGCACGATCT
CGGCTCACTGCAAGCTCCGCCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGA
TGGGGCCGATTTTTAATCCACTAACAGGTACCTTGAGACTAGGGCTCACTATACTTTGGTCAGAGATGCTCTAGGCATG
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GGTGGGCTTGTCTTAGGCAGTAACTAAGCCTAGAGTCAGGTCTACTAATAATCCATTAAGATGCTGTGTTAGAAAAATC
CTCTCCAAATATGATGGAAATAAGTATGTATAAGAAGTATTTCACAGATGAACACATTCCCACTTTATTAACCAAGTGC
CTGTGTGCTTGCTTAAATTTTTCACATTTTCAGACACTTAACATATTATAGAAAATAACATCCAAAGAGAACATGATGT
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TTTACTACAGCAAAAAATGTTAATGTCCATTAAATTAATGGACTTTGCTCTGATTTGGGGATGATAATTGCAGAAATGA
GTAGGGATATATATATGATCTAATATATAGAAATGGATATATAGAATATATATGTATATAGAATATATATAGAAATTTCTA
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TACCATATTTGTTCTATTTCATCTTTTTGCAAGACAAAATAGATACCCAGGGGGCTGGGGAAGGTGACCAGTAAGTTAC
TTCCATTATTTCTTTTTCTTTTTCTTTTTTTTGAGATGGAGTCTCACTGTGTTGCCCAGGCTGGAGTGCAGAGGCACA
ATCTCGGCTCACTGCGACCTCCACCGCCTGGGTTCAAGTGATTCTCCTGTCTCAGCCCCCCGACTAGCTGGGATTATAG
GCGCGCACCACCACACCTGGCTAATTTTTGTATTTCGGTAGAGACGGTGTCTCAGGATGTTGGCCAGGCTGGTCTCAA
ACTCCTGACCTCAGGTCATCTGCCCACCTCAGCCTCCCCTATTACTTTCTTCCTTTATCCTTTTCTACTGTTTAAAAGC
TCAAAACTTGTTGAAACTCCCTCTCCATCAGATTCTGTGTGCCCAAAGAACTGTCCTTGGAGGAGAGTTTCAAATGTCT
TTCATTTTAATGTCTGGCCTTGGTGATTGTTTAAGAAGTCCCCTGAATGAATTTTTGGGTGAACTCGGGGCCTAGACTG
GCTCAGGAAATCTGGCACTGAGCCCCATATTTACTTTGGCCAAACACAATACTTGCTGTGCAGCCACATTCACTATGCA
CTGCTCACACCACGCAGCTTGAGAGCTTTGTCCCTGATTCAAATCTGCTGGGTATTATTCAGTCTGAAAATTTACTTTT
ACACCAAGCATATAAACAAAATGAAATACAGTTTAAGAAATCAGCTCATAACATTTACAATTAAATTCATTAATCAAGG
CAGCTTATGGAAATGCCACATGTGAACTGTAAACTTTATAAATATTCAAGTAGTGAACAACTAGACAATCACATTGGCA
GCTTTGTTTCAGTATAAGTGATGTAGAATATTACCATCCATCAGCTTGCAGTTTTGTTTTAAAACTTGTTGAACCATGT
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TTCGTACTAATTAGCACCTGCACTGAATTCAGAAAGCAGCACTTGAATCAAACCAAGTCAAGCTGTCTGTGAAGGAAAA
AAATACCAAGTTCCAAGATTTCTTGTTAATGGAGATGAACAGTACACTTTGTTGATGTTCTTATTCACATGTGTCTTCT
TAAAGTATGAGAATTTAGTATATGTTCTTTCAGTATATGCAAATATATCCACATGGGTATTTTCAAACTATGCTGCAGT
GTGCTTTGTCTGGTTACCAGTTTTTATTCTAGTACAAGAATGCAGGATGTTATTCGTCACATTCACACTATATTAATTT
AACCTCCTAGGTCTGGGAGGAGAGAGGAGGAAAATTAAAGGAGGCCCAAGCTTTGCATTTGAGAGAAAAAGTGAACTGG
GTCTTGAAAGATGTCTTAAGAAACAAAAGAGAGAAAGAAAATAGAGGAAATGTTAGAAGTTGAGGTAAAAGTGTGTCAT
GGAGTAAAGAAGAGCATGGAGAGAATACTATTAGTCAAGAGAAACTGCAGCTCAAACACTCAAATGCAGAAGCATCATA
AACAAGCTAAATTCCACTCTTCCTTTAGTTCATGTGTTTTGGTCTATGTAAGCTGAAGACAAACTCTCCTTTTTCCATG
CTCCCATACCTCATAGAATGTGTTTGGAAGTATTCTCTCCTCTTCTATTTTTCAGAATAAATTGGGAAAATTGGTATTA
CTTCTTTAAATGTTTGGTAAAATGCAGCAGTGAGGCCATCAGATCCTGGGCTTTTCTTTGCTGGGAGACTGTTTATTAT

Fig. 9.146

TACTTTGATCTCATTACTTACTATTGGTCTATTTGGATTTTGGACTTCATGGTTCAATCTTGGTAGGTTGTATGTGTCT
AGGAATTTATTCATTTCTTCTAGCTTTTCCAATTTACTGCCATGTAGTTGCTTATAGTAGCCTCTAATGATACTTCTAA
TTTCAGCAGTATCAGTTGTAATGTACCCTTCTTCATCTCTGATTTTATTTATTTGTGTCTTCTTATTAAGATGCTATGT
TAGAAAAATCCTGTCAGAGTCTGGCTAAAGGTTTGTCAATTTTGTTTATCTTTTCAAAAAATCAACTTTTTATTTCACT
GATCCTTTGTATTGTTTTCTTCATTTCAATTTCATTTACTTCTGCACTGATCTTGATCATTCCTTTTCTTCTGCTCGTT
TTTGGTTTGGTTTGATCTTGCTTTTCTAGTTCTTTCAGGTGCATCATTAGGGTTTTTTGTTTTTGAAGTTTTTCTTCTT
TTTTTGATATAGGGTATAAACTGCCCTCTTATTACTGCTTGCAACTGTACCCGTTAGGTTTTGGTATGTTTCTGTTTCC
ATAACCATTTGTTTCAAGAAATGTTTCAATTTCCTTAATTTCCTCATTGACTCACTGCTCATTCAGGAGCATATTGTTT
AATTTCTATGTGTTTGTTTAGTTTCCAAAATTCCTCTTATTGATTTCTAGTTTTGTTCTATTGTGGTCAGAGAAGATAC
TTTCTATTATTTCAATTTTTTTAATGTTTTAAGACTTATTTTGTGGCCTAACATGTGGTCTATCCTTAAGACTGATTC
ATGTGCTGAGGAAAAAAATATGTATTCTGCAGCCATTGATGAAATCTTCTGTAAATATCTATTAGTTCCATTTGGTCTA
TCATGCTGATCAAGTCCGATGTTTCTTTGTTGAACTCCTGTCTAAATGATGTGTCCAATGCTGAAAGTGGAGTGTTGAA
CTCTCCAGCTATTATTGTATTGGGGTCTACCTCTCTCTCTAGCTCTAATAATATTTGCTTTATATATGTGGATGCTCTA
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GTCTCTTTTTATAGTTTTTGTCCTGAAATTTATTTTGTCTGATATAACTGTAACTATTCCTGTTCTTTTTTGGTTTCCA
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ATATTAGCATTGGTAAGAAAGAACTTACTCTGCCATTTTGTTGTTTTCTGGTTGCTTTGTTTTCTTCTTTCTTCTTTCC
TTCCTTCCTGTCTTCATTTTAGTAAAGGTGATTTTCTCTGCTAGTATGTTTTTAATTTCTTGAATTTTATTTTTTGTGT
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ACAAATTAAAACTGATTGCATAAACAAACAGACAAGGAAAGAGAAAAGTAATAATTTTACACTTTWACTTTGTCCTCCT
ACTTTCTACTTTTTAACTTTCATTGTTTCTTTTTTTTTTGAGATGCAGTCTCGCTCTGTTGCCCAGGCTGGAGTGCAGT
GGCGTGATCTTGGCTCACTGCAAGCTCTGCCTCCTGGGTTCACGCCATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGA
CTACAGGCGCCCACCACCACACCCAGCTAATTTTTTGTATTTTTAGTAGAGACGGGGTTTCACCATGTTAGCCAGGATG
GTCTCAATCTCCTGACCTCGTGATCTGCCCGCTTCAGCCTCCCAAAGTGCTGGGATTAGAGACATGAGCCACTATGCCT
GGCTGTAGTTATTATTTTTGATTGGTTTGTCTTTTAGTCTTTCTACTCAAGATATTAGTAGTTTAAACATCGCAATTAT
AATGTTATACTATCCTGCGTTTCTCTGCATATTTACTATCATCAGTGAGTTTTGTATTTTTAATTGATTCTTATTGCTC
ATTAATGTCCTTTTCTTAAGAAATCCCTTTAGCATTTCTTATAGGACAGGTCTGTTGTTGATGACATATCAACTTTTGC
TTGTCTCAGAAAGTCTTTATATCTCCATGCATGAAGGATATTTTTGCTGGATATACTATTCTAGAATAAGAGGTGAGAT
CTTTTTTTTTTTTTTTTCCACACTTTGTGTATGTCATACCACTCTCTGCTGTCAGACATTTTGGAGCGCCACTATATAT
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CATTAAGAGACTCTGATGCATGTAAATTACACTTTTCAACTACAGAATTTCTGCCTGATTCTTTTTATTTCAATCTATT
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TTTGAATTTTCTGTTTGAGAGGACACATCTCTGTCTTTCCAGGATTGGTCACTGGAGCCTTATTTAATTTGTTTGGTGA
GATCACGTTTTCCTTGGTGGTCTTGATGCTTGTGCGTGTTCATCAGTGTCTGGGCGTTGAAGAGTTAAGTATTTAGTGT
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CCATGGAGGTGTCCCCGCTTGGTGTTCTTGAATAAGATCCAGAAGAATTCTCTGGATTACTAGGCAGAGATTCTTGTCC
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GACACTAGCACCCTTGTGGCCACCACCACTGGGATGGCGCTGGGTCAGACCTGAAGCCAACACAGCATTGGATCTCTCT
CAAGGCCTGCAATGACCAGTACCTGGCTACTGCATATGTTTGCTCAAGGTCCTAAGGCTCTACAATCAGCAGGTAGCAT
AGCCAACAAGGCTTGTATCTGTCCCTTCAGGACATCAAGTTCCCCTTTGCCCTAGGAGAATCCAGAGATGCCATATGGG
AGCCAGGACCTGAAGTGAGAAATCTTAAGAAGCTACCTGGTGTTCTATTTTACGTGACTGACCTGGCACCAAAGCTATA
AGACAAAGACCTCCCCGTTCTTCCCTCCCTTTTCTAAAAGCAGAGGAGACTTTCCCTGAGGCTACCACCACCCTAGACC
TATGGCAAGTGCTGCCTGGCTACTGCCAGTGTTTACTCAAGATCCAGTAGCTCTTCAGTCAGCTTGTGGTAAGTGAAAC
CAGGCCTGAGATTCTCCCTTCAGAGCAGTGGGCTACCCTTTTGCTGAGGGCAGGTTCATAACTGCTGTCCGAGAGCCAG
GGCCTGGAATGGGAGATCCCAAGGGCCTGCTTGGTACTCTACCCTACTGTGGCTGAGCTGGAGCCTAAGCTAAAAGACA
AAGTCCTCTTTACCCTTCTTTCTCCTTTTCTCAAGCAGAAGCAGTCTTTTCCCATAACTACTACAGCTGGGAATGTTCT
GGGTCACACCTGAAGCCAGCATTTCTCAGTCTCACCCCAGGCCCACAGTGAGTACCACCTGGCTATTGCTGCTGATTAT
TCAGGGGCCAAGGGCTCTTTAGTCAGCAGATGATGAATGCTGCCAGGACTGCTTCCTTCCCTTCAAGGCAGCAGGTTCC
CTTTTGGTCCAGGGTATTTCTAAAAATGTCATCCAGGAGGTAAGGCCTGTAATGGTGGGCTCATGACTCTGCCTTTTGC
CCTATCCTACCATGGATAAGCTGGTATCCAAATTGCAAGACAAAGGCCTCTACTCTTCCCTCTCCTCTCCTTAGGTGGA
GGGAAGGAGTCTCACCTGCAGCTGCAAGCTGCTCTGCCTAGGGTTGGGGGTGGGGTGGCACAAGCACTCCTTTGGCTGC
CCCTGCTAGTGTCTCACTAGGTCACATGTCCCCCATAAACACTAATTCTAAACCCATCCCAGCATCAGTACTTGCCCAG
GAATTTCAGTCTTTGTGGCTTAGACTGTCGTTCAAGTTTATTTAGTACCCCAGAACACTTTAACTTATGGCAGTGAGGC
TTGCTGGATTTCAGATTCTGACTGCTGGAATGGGCAATTTCACTCTGGCTAGGGCTGGTCTATATTCTCCCTCCACTGG
CGCTAGCTGAGTTCTGCCCAGTGTTGCTTTCCACTGTGACAGGGCAGCACTGAGTTCCAAAGCAAAGTCCCCCAGTCGC

Fig. 9.147

TGCACTCTCCCTYCCCCGAGCACAAAGATTCACTCTCTGTGCCACGTGGCCACTGCTGACGCATGGGGGAGGGGTGGCA
TCGGCCATTCAAGACTTTCTTTCCTACCCTCTTCAGTGCCTTTTTCACTGATATATAGCTTAAACCAGGTACAGAGATT
GCTCACCTGATTTTTGGTTCTTAGATGGTACCTTTTTGTGTGGATCATTGTTAAATTTTGTATTCCTACAAGGAGGATG
ATTGGTGGAGGCTTCTATTTGGTCATCTTGCTCTGCCTTTCCAAAATAATTTTTATTCTGTAACATGTTGCCCTGTTAC
CCACAAAATTGATAAACCAGACTTCCTTATCTTCACCCAGGTTGTTGGTTAAAATGCAAAATTAGAATTCTGGATGTCC
TTTGAATCATGTTTCCAGGTTAATCTCAAGCTATTAATCAATACTGTCTGAGTACAGTATTTAACCAGCAACCAGCAAT
TAATCTACCCAAGAGACTATCATCAACATCACATTTCAAACAACAAAAATCAATGATATGGTTACAACAAAAATCAGTG
ATATATTTAATAGTCCATGTTTTTTTTCTATAAATCAATATTGCGTATCTGGCACTGTAGTACTCATATCTATCCCATT
TCTTTTGTTGAAATTCTCAATAACCTCAACTTTTGATTTCAAATGTTAGGCCTTATTATATTTAATGAGAATTAACACT
ACTTAATAATGTTCATATTATATGAATGGCCATTATGCTGTTTTCGTGTTTTAAAAAAAGTTTGCAAAAAACATTAATT
TTTTGCCTAAATTATTTTGAACATTAGACATGTTATATTTTAGCAACCCTAATAATAATAATTTTTAATTATTACACTT
AATATCCTGCCCACTTTGAAATATTGACATCATAGAGCTTATGTATGAGACAGGTAATTAAGTAGTTAACATTTAGTAA
GGATGTTTTATGTGGCAGGTACTATTCTTAGCATTATACACCCATTACCGTACTTAATGTTCACACCAACACTATGAGG
TAGACACTTTTTTTAATATACTTTAAGTTCTAGGGTACATGTGCACAACGTGCAGGTTTGTTACATAGGTATACATTGC
CATGTTGGTTTACTGCACCCATTAACTCGTCATTTACATTAGGTATATCTCCTAATGCTTTCCCTCCCCCTCCCCCCTC
CCCCCACCACATGACAGGCCCCAGTGTGTGATGTTCCCCTTCCTGTGTCCAAGTGTTCTCATTGTTCAGTTCCCACCTA
TGAGTGAGAACATGCAGTGTTTGGTTTTCTGTCCTTGCTATACTTTGCTCAGAATGATGGTTTCCAGTTTCATCCGTGT
CCCTACAAAGTTATTATCCTTTCCAGATGAAGAAACTGAAGTTCAGAGAAGTTAAGTGGCTTACCAAAAGTCACACGAC
CAGGATTCAAGCCTGGATAATGTGGCTCCAGGGTCTGTTCCCCTAACCACTATTTCATAATAAGGACTATCTTCCAACT
AACTCTGTATGTTACATACTGCTAGTTCAAAGCCAGGTAGACGAAAAAATACTCCCTGTTTCAGCTGAAGAAGGTTTTC
CAATATATTTTTAGCTGCAAATATAAAATACCACAAAGCCAATTTACATTAAAGGAGAATTGTACATTCAACACATCAG
CATTTCCACAGGATTGTAGAATAATATATTAGAACAAAAATAGTGTTTGTAATAGAAATACAGTTATTTTACTTTGGAG
AATGGGCTTGGAAATGGCAGAGATAAGAATTATAAGTTATTTATAATTAGCTTAATAATTTCGGTATTCTTATCTGCAG
CCATACAGAGTTATGTGAGTTGTGAACTGGGATAGGACATTAAAGCTGACAGGGTTACATCTGGATCAGAAACAAGACA
AAAAAGATATGCCTCTTCATGAGCCTCATCAATGCCCCAGCATATATTGTTATTGCTAGCACAACATTAGGGTTTTGTC
TAAATTTTACTTATGGTTTTAGTGTATTTTAAAATATTTAAACAATAAATTTTATTTTACATAATCTCAATTCAAGATT
TCATACTTATATCTTTTGTTATCAGAGAATATTAATTAAAATTTACCATGTACATAGAAGAAATAGATATATAATATGC
CTCATTTAATAATAGGGCTATGTTATTATAACAAAGCATCTGCTCTGTCTTTCTCTCAACAGACCAAATTAATCTTTGC
CACATTATTCCTTGGACATTTGAGAGGTTAAAATATATGCGCATATACATGTAAAACCAATTTGAAAAATAAAAGTTCC
CAAATGTTTATTCAGTGTCTACTTTGTGGCAGGCACTGACCTGAGGGCCGAAGAAAAATAGGGAGGGTCTTTCCCACAA
GAAGGAAGAAAAGGAACAGATGGTGCATGATTACCAGGTTCAGTGGTTTGCATGGAGTGCTCTTCAAGCACTGATAAAA
AGTGTCTAAATCAGATTAGATGGAACAATGTCAGATATGGCTTTTAGAGGATGTGAATCTGACCTCAATTTGAGAATGG
GTAGTAGTTACCTACATAGGGATGACCATTTATGCATAAAGTACAGATACAGTTAATCCCACTTTTTGATAATGAGGGC
CTGGAATTCTTTCATATCTAATGAAAGAATAAACCTCCTAGAAAGTCCATGCAGATTGTATGGTACACATTTTAATTGG
TGCCTAAGAATGACTGTAGTTGGAGAAAGGAAGGTGAAAACTGAATAATATTCTTGAGCTGAGAATATTTCTATAGCCT
TACTTTAAGCACACATCTTAAATCCAGGCTAAAACTCTTAGACTGGCATTGGCAATTAGCTATTTCATGGATATAAACT
AAGGAGACTTGACGTTACCAACCTGCTTGGGGAGTATTTTGCTGAGTCTATCCAACTGTTATCAATTCGAGAACAATAC
TTTTTAATTTGAATCAACCTGTTTTTTTAAAAAAGGTTTTGTTTTAACTAAATTCATCTGTTCTCCCCACAAAAAGCCA
GTTTGTTTGTACTTACATATCTCTATGTATACATGTATATATTTTTGAGTCTGCAATATTCTTGTCAGAATAATTTTGC
TTCCTTGAATATTTCAACTATTCAAAAATTTACTGGGTTAAAACAACACACACTTACTATCTCACAGTTTCCAAGGGTC
AGGAGTCTAGGCATGGCCTAGCTGGTCCTCTGCAAGGCTGCAATCTAAGGTCACTAGGGTTCAGTTTTCATCTGGAGGC
ACCACTGGTGATGGATCAACTCCTGAGGTCACTCATGATAATGAGAGAATTAATTTCCTTGCAGCCGCAAGACTGACGG
TCGCAACTTCTTGGTGGCTGTTACTTATATCAGAGGTTACGTATCAGAGGTTACATTAGCTCTTAGAAGCCATCCTCAG
TTCGCTACTACCTTGCCCTCGCCATAGACCCTTTACAACAAGCAGCCTGCTTCTTCAAATCCAGCAAGAGAGGAAGAGA
GTGAGTTTGCTAGTATGACTGGATTTTATATAGCATAAGCATAAGAGTGACAGGGCATCACTTTTGCCACATCTTATTT
GTTAGAAGCAACTTAAAGTTCCTGCCCATATTCAAGATGAGGAAAATATAAACAGTTGTGAATACCAGGAGGAAAGAAT
CATGAGGGTTACCCTGATATCTGTCTGCCACATCCCAAAAAGAAAATCTATTTCAGGCTTTGGTATCATTTGAAAGGTT
TCCAGATAATCAGGTAGTCAACATTAAATAATTGTTTGAATGACATTTAACTATTGCACAAACAGGTGCCTCTTTAAAA
AAAAAATACACACACATATACACATACACTTTTTTAAAGCAGAGTCCAAGTGTGCCAGTAACTGACTTGAGTATAAAGC
TTATTTTTTTAATGTTATTTATCTTTCAAACCATAACAGAAAATAATTTTATTTCAAATGATGGTTATATATTTTTTATC
ATTATTAAATATAATACTATTTTTCTCCAAATTTATCCCACAAATTTTCTCTTTTTTGTGTAATTGATTGTGTATAGTA
TAAAACTATAGGTCACTAGTTTTAGCAACTGATTGAATTTAAACTGATTATGTGTTTGGATTTTCTATATAAGCTAATT
TTAATTACATTAAATGTTTATAGCAGTTTGTAAAAAGAGATGCAATCGTAACATTTTATTCTATATTATTTTAATAAAC
AATCTATTTTTATATAACAAAATCTATAAAGATATTGACAAGAATATTAGGTTATATTAAATGTTTACAAATGGTCTTT
TAGATTAAATAAGTTGCATTGAAATAATGTGCTTCAGTCTTTCAAATTCATTTTAACAATTTGTTCAGCAAATATTTTA
TTAAGCAAGTGTCAAGTATGTACTAAAAGCTTACAACACAAGAGCAACCAAGTCACATATTATTTGAAGCCCTAAATAT
TCAGGGCTATGTTAGAAGAGTATTAATATGAAATAATGAATAAGGACATTAAAAGTCAGAGAGTTTAATTGATATATTA
TAGGTTATAAATTTAGGGATCCTAAAATTGGGATTGGAGTCCAGGTCTTCTGTATCACAGTTTACTGGCCTTTCACTAC
CTCTTGTAGCTCTTAAGTAATAAGTTGCCTTCATTTGTCAGAGAGGGTGATCAGTGCCCTGCAAAGTTCTTTTCATGAA
GCAGTTATAGCTTTGTGTTGATCCATAGACTCTCTGGTTTGTTCCCCATTGAGACCAGCTAAGCCATGAGTCACAAGCT
GATGGTTAGAGTTCAGCTTGGAAACATGAAACAGAATGAGGTTAATGACACAGATCAGAATCAAGCCTGTGACTTTGTT

Fig. 9.148

TTCATTAGTATCATGCTCTACATAAATTTGCTAGCCAGTCGTAGATGTCAAAGTAGAATTCAATCTATACATTAGTTTT
TCTCTTCCTCCTTTGACCTCCAGCCGTGTAATGAAAGACTTCTTCAAGAAGGATGGCCGGGCATGGTGGCTCACACCTG
TAATCCCAGCACTTTGGGAGCCCGAGGCAGATGGATCACTTGAGACCAATAGTTCAAGACCAGCCTGGCCAAAATGATG
AAACCCCCTCTCTWCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATTAGCCGGGCATGGTGGTGCACCCCTGTGGTCC
CAGCTACTTGGGAGGCTGAGGCAGGAAAATTGCTTGAACCCAGGAGGTGGAGGTTGCAGTGAGGTGAGATTGCACCATT
GCACTCCAGCCTGGATGGTAGAGTGAGACTCTGTCTCAAAAAGAAAAAAAAAAGGAATCTATGTAGTTTTATAGATTTG
CAAAAAATACTATATTCCCAATGTATGCTGTGACTCTTAAAAGTATTTACTAAATGTTGCCAATATCTAGAACCATCTC
TTAAAAAATATTTCAAACATATCAGTGTTAACAATTAATGGTGAAACAACAATGTGATTAAATGGTGTTTTAAGTAGGT
TTTAAAACCAAATTATATGTACATTGCATTGGCTTGTCAGACTCTAGTTATTAAATGCATCGATTTTACCCTGGGAACA
CTCTTATTTCCCTACAGTTTACCTTTTAATAAGTGCAGTTGGCACATGTTTTGACCAGAGTTATTATATGTCTTATTGT
TCACTGTATGTCTGGGACTTTTTTTTTGTTTTGCATGAACTTGGCAGCAAATTCAAAACTTTTCTCACATTAATAAAGCT
ACTGGTTAAAATATGTCAAGGGCAGAGTAGCTCATTCTTGTAATACGGTTGTATATACACACACCTTTGTTTTGTTGTT
ATAGAAAATGCTAATTAGTATTTCCTGATGACATGTGAGCTTGTTGCATAGATTATTTTCCACTTACCTTAGGTCTTGG
TGTATTAGGCAGGCTGCGAAGCACAGCTTGCAGGGGAGGGCCACCATTGTCCTTTTCTCCTTCAAATATTATATAAAAG
TTCAGGAAAAAAAGCATTCTCATAGATTATATTTGTGACTGACTACCCGTATTTTGGGGTTTGTGTGGTGTGATGAGT
AGAGATTAAATAATGGAACTAACTTGGTTATAGATAGTTCTGGGGACTAGGAGATTAAAGACAATAACAGATGTGGGGA
AAAATTACTTTTGTAGAAATATTCAAGAGAAATTATTTCAGAGAAATAAATGTATGTTTCATGTTTAGTTCAATGTTAT
TTTCAAAGGATTATGTACAAGAGAACCCCCACTGTATTTTTTCCGGAGTGATGATGTTCCTGATAATTTATGTCACCAA
AAAGAAATGTGTTCTAAATAAATGAAAATTACCTTTAGAAAAATACCTGATTTACTCATACTTCCTATTAAGAGTAAGA
CACGAATATGAGAGGGAAAAGTAATACAATCCTGACATAATGCAATGCCTTAGTCCCTAGTGAGGTAAAATATGTGATA
CATATATGTTTAATGGACATTATTGTGAAGAATACAAGAACAATGACAGTTATTTATATTGCAACTTAGAAAGGATACA
AATGAATGGTTTTCTTTCTCAAAACAAACTGTAAAACTAAGGCAAACCATTTTCCTTTCCAAGGTCTGCTGAAGCTGAC
AGCTGCCACAAAGCTTATTCCCAGTGTTCTCCAATATGTAGCCACAACAAGTTGTTGAGTCCTCTTAAATAACTAATGT
CAGTTATTAATATAAACTTTAGAGTACTCTTAATTGTGATTGCACCATCTCTTTCCTTGGTTTCTGGGACCATTTCTAT
TCTTCTTCCTATGGACTCACCTTTCTTCAGTGTCCTTTTCTGATTCCTTCTAATTTGTCCAATTCAATCCTCAGACTGT
TCCATTCTGCCCTAGYTGGTCATCCATTGACTGACAATTCACAAATCTATTTCTCCAGCTTCAGCCACAAAAGAGAGTT
AATATGTCCACTCTAACTCAGAATCTCTATAGAGAAATGTACAAATTATACTCAAGGTAGACAAACACAAGTACACTAT
GTTTTTGTACTCCACTTGAAGCTTTAATAGATTCTCTCCAACTTAATCTGTCTTAAAACAAACTCTGGATTTACAACYT
TCAAACSTGCTCCTTCCCCAGAAACCCCACTTCACTCAATAGAAGCACTATAATTTGGGTTGCTAAGACCAAACATCTT
CAATTTCTTTTCCTTTCTTTCCTTTTACACACATACACACACACACWYACAYACACACACACACACACACACACACACA
CACACACCCCTATCAGTAAATTATAACCAAGCCTTAACTATACTTCCCCTTCTCCTACCTACTTCTTCCACGCCGGGCC
AAGCCAGTTATCTTTCTTAATTGTTGAAATAGCTTCCAATCTGCTATATGTATCTCCACACTTGCCATTCTACCGTCTG
TTTTCAACATGGCAGCCAGAGTATGATCTTCTTAAAATAAAACTCAGACCATGTCACACTTCTCAAAACCTGTCAAAGG
CTTCCATCTCATTCTGAATCAAAGTTAAAACCTCTTCCCCCAAACACACACACACACACACACACGCACATGCACACAC
ACACACACACACACACACACATACATCTTCCTGGCTTTGTCTTTTCTGATCTCTCCCTCAACTTGCTCCAGCCACACAG
GCCTCCTAGTTGTCTTGCCCTGCCCCACAGACTTTGTCCTGACAATCCTGTCTGCCTGTAATGCATTTACCTAGCTTCC
CTCAGGTCTCTGCTCAAAAATCACCTCAACAGAGAGGACTTTCCTGACCACATCTTGTAAAATTGCATACCTCCCTCTC
CCAGGCTCCTTACCTTTCCCAGGCTCCTTAACCACCCCCCATCTTTGTTTTTCTCCACAGAACTTATTATCACCTGATA
AAATATGTATATTAATATTGTTGTCTATTGTCTACTTTAAGGATGACAGGGATTTTGTAATATTTGTGCCATAGTCTAG
CACCTAGGACATGTAGTAGTTATTCATATGTATTAAATAAATAAGTTATATGAAATATATCATTTAACAGCTGATTTGC
ACAAGTGGGAGTCAATATGTCAATTTCAACTTAGAATTTCTGTAGAGAAATGTACATATTCTACTCAAGGTGGCCCAGA
CTATTCTTAAACCATATTTAAGAAGGTGAAATAGAGATATGATTTGATGGTTTTTATTATTATATGGTTTTCAGTATTG
GATACAGCASKGCACAAATTATATTAAAACTACAATTAAAAACTACAATTTCATGCCAAAAAAACCCTGATTTTACTCT
GATCATCCTTCAAGGCTGTTGTTCTTGATTCTAGCATTGATATTTCATGTTTATTTCATTACATTTTATACTATTTTAA
AATATTAAATATTTAAAGCATATATAAGCTATTTTCACAGTTGATTTGCATTAAGTGGAAGTTAATATGTCAATTCTAA
CTCAGAATTTCTAAGTAGAAATATACATATTATGCCTGAGGTAGACAAATACAAATATACTATATTTACTATACCATGA
CTATTTAGTATCTTTAATCCCATAAAAATTAATTACCTGACTTATTTCCACCAAAGCTCTTCTAATTAAAGTTTTGGAC
CACAGTGAAAGAAAATAAGCTTTAATTTATATGTATTAAATTTTGTATATCTTCCTTTTTCTCTCTCCAATGGAAGTCT
TATGAATGTGTAATTTAGACATGTTTGTCTAGCTCTCACATATATGAAAGGTGTTACTGTTAGCTTTTCTAAACAGAAC
ATTGTAACAACTGCCACACCTACAACCCCATTCAGCCAGAAGTGCAACTCCCCAAGCTTTGGGAATTTTCTACTAAAGG
ACTTGAAAGAGTCAATGTTTCATAGTTAAGTTGGGATTAAGGAACCATCTTGACCACAGATTTCTGAATTTTTTTAGTA
TATAATAATCATTGGCAATTATCTTGTCCAATACCTTCCATATAAAAATAAGAAAAAAATGAAATATTCCTCATGCCCTT
GGAAAATTGCTGGCTTAGTTTTCTTTTCCCTGTAATGGCTTACCATCTGGTCATTCAAACTGGGCCAGCCACTTCTCAA
GGCTGCCACACTAGCCTATTGCTCCTTCCATGATGTTTTCCCCAATGTTTGTATTTCTGGTTCCTCCATGTCATTCAGT
TCTCAGCTTGAAGAACACTTGTCAGGGAGGTCTTCTCTGGCACCCAATCTAAAGCAGCCTTCAGTCACCTACTAGCATA
TCTCTTATTTTATTTTTCAGAATAACATGCCTCACTATTTCCTTTCTGAAGTGTTTGTTTTTAGATTTATTATGTGTTA
TTGTTCATCATGGTACATTAAATACAGAGGGTAGCAGCCTTGATTGTTTTGTTCACCACAGTATCCCCAATGAGTGGAA
CATTTCCTGGCAATTAGTTGGTGCTCAATAATTATGTATTTAATAAATGCATGATGTAATCCTTGTTACTTTTCATATT
TGTATTAGTGACTAAAAACCATGAGGGGGCCTAAGAATGTACAACCCAACAAATACAGACTTTCCACCAGCCACATCAT
GGGCCATTTAAAAAAACACAAAATTAACTGATCTAATTGTCGTAAGTCTTCAGAGTTATATGCCCAGTTGTTTTTGACA
TTGCCAGACTACTCTTTGATAAACCTGTCAATACAATTAATTTGTTGATAATATGCATATCTCATCACCAAGTGCAGTC

Fig. 9.149

TTACTTTCCTGCATCTGAAAGAAGAAAGACAAGAATGCTTTCTGCTTCCTCTTGACATTTTCCTTCCCGGGAAATATTT
TCCTCAAGTATTTAAGGTGAGTTACATTAAAATATWGAAAAATTAGCTTAAATCTTTTCTTATCAGAAAAATAAGCTGA
TCATATTCATTCAACAAATGATTTCTGAGCACCTACTATATATCAGGCTCTTCTGTCATTGGGATTGGTTTCTAATGGA
AGGAGCAGATAACAAACAAATAACTAGACGGCAACATTCACGTGTTATTATATCCTTACCACAGTCCTTTGATGTAGGA
ATTATCATTCAGACTCACACTGCCAGCTGCAGAGTTGGGATTTGAACATAAATTTCTATTAGTTTAAAGCCTCCTCCCT
TTGTACTTTATTGTTTGGAAAAAGAATATTCTATGAAAATTTAAATAATAATAACAAAACTGTGAGTCTTATAGGGCTT
TAAAATCATTATAATTTATACAAAAAATAAATTATCCATTTAAACAGAGAAATTATTCCTATGTTTTGGTCATAGAAAC
TAAGTGCATTATACATTACCATAATACATTACTTTAAACATCTAAAAAATGAATTATAGTATAAATTAGACCTCATCAA
AAGATCATTCAGTTACATAGTTTATCAGTTATTGTCCAAAGTGTTCTCAGTAAGACAGCTCTAATTGCTTTAAAGTGTT
TAATATGGCAGACATTAGATTCTGGTAGGTGGATAAGCCAATCTTTAAGTCAACCGATGCTCCTGTAACTGCCCAGTGG
GTTCATTTTGCCTCCTGCCCAGACAGAGCCAATTTATCAAAACAAACGAATTGCAATAGAAAAAGTTTAATTCACGCAG
AGCCTGCTGAACAGGAGACCAGAGTCTTATTATTACTCAAATCAGTCTCTCTGAAAATTCAGAGACTGGGGTTTTTTAA
GGATAATTTGGTAGATAGGATGCCAGGGAGTGCTGATTGGTTCGGTGGAGATGAAATCATAGGGAGTTGAAGCTGTCC
ACTTGAGCTGAGTTGGTTCCTGGGTGAGGGACACAAGACCAGATGAGCCAGTTTATCAATCTGGGTGGTGCCAGCTGAT
CCTTCGAGTTCAGGGTCCAAAAAATATCTCAAGCACCAATCTTAGGTTTTACAATAGTGATGTTATCCCTAGGAGCAAC
TGGGGATTTTTAGAATCTTGTGACCTCTAGATGCATGATTCCTAAATCGCAATTTCTAATCTTGTGGCAAATTTGTTAG
TCCTACAACAGCCAGTCTGGTCCCCAGGCAAGAAAAGAGTTTGTTTTGGGAAAGGGCTATTATCATCTTTGTTTCAAAG
TTAAACTATAAACTAAATTCTTCCCAAAGTTAGTTTGGCCTATGCCCAGGAATGAATAAGGACAGCTTGGAGGTTAAAA
GCAAGATGGAATCTGTTAGGTCATATCTCTTTCTCTGTCATAATTTTTTCACTGTTATAACTTTTACAAAGACAGTTTT
ACTCCTATGATAATCCTTCAGTTAGTTCACTGTCTAGTTCCTGGGAGTCTGTTTTGTGGATCCTAACCCTACCCCAAGG
ATTCTACTGCATTGTAAATTCTGACTTTACATTTAAGACATGGAGTTCTTTGGGGGCAGGGAGATAAATATCCTATTTT
AACTATCAAGGGTTAAAGTGCTTTCAAGGATCTAGTGTCTGGTGGTGATACCAGAGTCATACAATTCAAATTACAAGCA
TCTGTTTGTTGTGTTGAGAGCAGGGACTGATAAATGAGGCACTTTTTGATTGTGCAACTGGGTATAAAACAGTCAAAAT
GATGCTTATAACTTCAAGCTTTTCTCCCACTTGAATCAGCCAACAAGATTTTCATACAACATTTAGACCAGAGTAGCTG
ATGCTTCTGTTTCTTGCATTTTGTCTGGTTTGGGATCAATTTTGTAGTCATGGATGTAGTTATAGCTCTTTGGTATGTG
AACATGAGAGAGGTGTAAGCTCATAAAATAAGAAAATCTGTTTTTGTTAAAGTAGACGATGTGCAATTCAGAAACAATG
AACCATATCAACTAAATAATGGGTTAAATCAGTAGAGACTTTGTCAATCTTGTATTGATTTAATCATTTCAAAATTATT
TATTCATTGTCTATAGGTATGCTAGGAGAATAGTTGAATACAAAAAAATGTTCTTACACTCAGGAACTTCACAATCAGGT
GCAAAAATGAGACAGGCATACTCACATTAAAAATTAAATGACAATTCAAGAGGCGGCACAGGCAGTCTAGGATAAACTG
CCATATGAATAATAGCAACAATAAAGTAGATGAGCTCCCAAAAAGGAAAGATCGAGGAAGGCAGCATGGAAAAATTTGA
CATTGCCTTGTGTTTGGAGTTGAACGAGTTGGAAGTGAATAAGTAGAGGTTTTTCCACGTTGCAGAGAAGTACGATGGT
GGGGGGTATATATGGGGCATTCAAAATGCATGAAACTAGGAATTCGTTTGTCATCTTTAGGAAATTTCAGAAGTAGTTT
CTGACCATTTTATGTGGGTCCTTTATTTTCAAGTTTAGACATTGGGATTTTATCCTGAGAATAATGGGGAACCATTGAA
GGTTTTCTACAGGGGACAAGGATAGCATGTTGGAATGACTAACCAGATAGAAATATGCACAATTTCTTGAAAATAGGGA
GAACGAGAAAGGAAGAAAGCAGAACAGTGGTTCTTGACTTTAATGTGCCACCTAAGGGCMAGGTGCAGTGGGTCACACC
SGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGTGGATTGCTTGAGTCCAGGTGTTTGAGACAAGGCTGAGCAACATGG
TAAAACTCCATGTCTACAAAAAAATACAAAAGTGGTGGTGTGTGCCTGTAATCCCGCTGCTCGGGATGCTGAAGTGGGA
GGATCGATTGAGGCCACAACATTGAAGCTGCAGTGAGCCATGATTGCGCCAGGGCACTCCAGCCTGGGTAACAGAGCAA
GACCCCTTTGTCTCAAAAGAAAAAAAAAATCCACCTAAGGAGCTTGTTAAAATTGCCGATTCCTGAACCTTACTCCAGA
GATTCTGGTTCAGCAAGTCTGGAGAGGACGCATAATCTCCCTGTTAAGGGTTAGATTCTAAATAAGTGGTCTTCAGGCC
ACATTTTGAATAATACTAAATTAGAAGGCTGTCACAATAATCTAGGAGTGAAATGGTGAAGGTTTGTATTATAATTTTG
GAAGCAGGGATGAAAAGAAAGTGATGGTTGGTAGAGATATAGTGAAGGAAGAATTGATAAGACCTAGAAATGTTTGGGT
ATAAGAAATCAAAGGGAAGAAATAGTTTTAAATGATATTAATGTATTTATCATATTTGATATTTTTGTTAATGTAACTG
GATTTGCAAGTCACTTAACTTACTTTAAAAAGCCAGTGCAAATWAAAATAATGTACAAATTGTAAACCAAGGTTGAAAA
TATAAGATCAAATGATGGGTATGGGAATATCTGTAAATAGGAAAGAAATTCATAAAAAAATTAAGCTACCACTTTGTGTT
ATTTCCAAGTGTATTCTAATAATTAGTTTTCCCCATCATGGATTTAATTAATTCTTAGTCAAGATTTCTGGATTTCTTT
AATCATTACCTTTTGAAAGTAGATGTAGAATTCTCAATTATCTAAATCTTCCACATTTAGCTGAGAGACCAACTCTAGG
GAATATATTAGAGTATTTTCATAGTTCCATCAGACTATGAACCCCAATTCTTAGTTAAGGCACTATAGCTATGGGAATT
ATAGTCCATAGTGAATAAAATATACAATCATGGACCTTATTTTGAATAGCTTCCAGAACAAACATATGCGAACATCTTG
AGGAGGTTATTATGGCTAGGTTCTAGCTTGCATCACTAAGTCATCAAGAATGGGAGACAAAAGGTATAAGGAAAAGTTT
TCAGTAGAAATTATAATAATTGTCAGAGGAATTATTTCAGTCTCAGGTTGATGCAAATTTGGGTACAGTGGATGCTGCT
TCCACTTGTTTTCGGAAGCCGTAACCAATAATCAAAAGCAAGCAACTTTTCCAAAAGTAATTCCATCTTGTTTTTTAAA
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GAATATTGCCTAAAATTGCTGAAATTACCAAGTCTTTAATTTCATCAACAGAAGAAAATAGGCAAAGAAATTCAGGCAA
ATTGAAGAGTTAAAACGTTATGTATAGGTCAGGTTCAGTTCAGTGCAAATAACTGTAATATTCCTTTATGTTTTAAAGG
GATGTTTGGTTTGAGAGGGAATGCTTTCACCTTCTGAAAGGGAAGAGGGAGGTCAAATAGTGACAAAAGAATGAGGACT
TGGGGGAAGTTTCAGCTAAGAGGACAAGCAAAAGAAGGCTGAGAACAAACAGCAATTTGTGGTGGGCATGTTTGGGAGC
TGTAAAGAGAATAGCTCTTGCTTTGGAGTAAACTTCCTCAGTCAGAACTAGGTCCTTGAATTCAGACCAGCTCTCATCT
CCTTGGTCCACTCTAGGGCTGATGGAGGCTGCTGAAATCATCTTTTGCTACATTAATACTCATTTTTCGCTCAAAGATG
ACAAGGAGTATTTAAACGCAGAGAGAATGTTATTTATAAATGATGATTTGTTCGTGATAGAACTTGCCACATAGTATTT

Fig. 9.150

TCTCTTTTTTAACTTTTATTTTAGGTTCAGGGGTACATGTGCAGGTTTGTTATATAGGTAAGCTAGTGTGATGGAGGTT
TGTTGTAACAGGTTATTTTATTTCATCACCCAGGTACTACGCCTAGTACCCGATAATTATTTTTTCTTTTCCTCCCCCT
CCTCCCATCTTCCACCATCAAGTAGATAGACCCTAGTGTCTATTGTTTCTTTCTTTGTGTCCACGAGTTCTCTTAATTT
AGCTCCCACTTATAAATGAGAACATTTACTAAATGGATCTTTATAAAAACAGTTTGCCGACCACTAATGAATAAGAAAA
TATTAGAATAAAAAAGCTCAATGTCACTGATCATTAGAGAAATGCAAATCAAAACCACAATGAGATACCATCTTACTCC
AGTCAGAATGGCTGTGATTAAAAAGTCAAAAAAATAACAGCTGCTGGCAAGATTTAGGAGAAAAGGGACCAGTATTCGG
TTTTCTGTTCCTGCGTTAGTTTGCTAAGGATAATGTCCTCCAACTCCATCCGTGTTCCCGCCAGTGACATTATCTCATT
CTTTTTATGGCTGTGTAGTATTCTGTGGAGTATATGTACCACATTTTCTTTACCAAATCTGTCATTGACAGGCATTTAG
GTTAATTCCATCTCTTTGCTATTGTGAACAGTGCTGCAAGGAACATTCACGTGCATGTGTTTTTATGGTAGAACAATTT
ATATTCCTTTGGGTATATACCCAGTTGTGGGTTTGCTAGGTTGAATGGTAGTTCTGTTTTTAGCTCTTTGAGAAACCAT
CACACTGCTTCCTACAATGGTTGAACTAATTTACACTCCCATCAACAGTGTATAAATGGTCCCTTTTCTCCTCCATTCT
GACTGGAATAAGATGGTATCTCATTGTGATTTTGATTTGCATTTCTCTAATGATCAGTGATATTGAGCTTTTTTATTCT
AATATTTTCTTATTCATTAGTGGTCAGCAAACTGTTTTTATAAAGATTCGTTTAGTAAATATTTTAGACTTTGTGAGAT
ATACAGTCTCTGTCATACTCAACTCTGCCACTGAAGTATGAGAGCAATCATTGACATTTACTCATGTAATTACATGGGT
TTGGCTATGTTCCAATAAAACTTTATTTACAAAAACAGATAGCGAGCTGAATTTGTCTAATAGCCACAGTTTGCCTGAC
CCTGTTTCATTGCAGTATGTGCTATTTCTATTGTGAATGAAAAGGCTAGCTTAGAAGGCTAACTACTTTTTCTGGCTTA
GGAAGCTAACTACTTTCTCTAGCATAGTTTCCTAGAGAAATAGGTTCTCGATTAAAAATAGATAGGAACCTGACCCACA
CTGTATCTGGCAAATTCTTTAACTAAAGAAATGTAAAACGCTTTGGAGGTACCTAAATAGTGGCTAAAAATTGAGTTCC
AGTGTTTTCTAATTATGAGATGAGGACACATTTTCCTCATCTGTAAATTAGGAATAACAATACCTTCTTCATAAAAAGG
CCATGGCTATCAAATGCCATCGCATAAGTGAAGTGCCCACTGCAGCAGCATCTGACATAGTAGGCCCTCCAGTAAACAT
CTGTTTTCTCCCTTCTCCATTGCCAGGAAACACATATGGAATAGAAATAAAAGTAGAAACAAAGGAGAGAAGAAGGCAG
AACTAGTTTCAGTTTTAAAATACAGAAGCTCTTTATCTCACTAAAATATTCATTGCCGGCTTAAAGGCAAAGCCCTATT
ACTAGTTCAACACAGTTCATAATTTTCAAAAGCACTACCCCTGTCATGGTACTGTGGGAGTTCTTGGTTTTTTACTCCC
CTAATTTCCTAAATTATATGTATAACATCATATATGGAATATAATAATGTATATATGCGTGTATACTTAGGTATACATG
CATTATTTATGTAACAGATATTGTGCTGAGCATTTTACATCTATTATCTCATATAATCTTTACAGTAACATTGCAAAGT
TGATTCTGTTATTTTCATCGATGAAAAAACTGACAGAGAGGTTAATGTAACCCATCTGTGGTTACACATCTAGAAAGTC
TTGGAGCTGAAACGGAAACTCAGGGCGTTCTGGCTGTAATGCCCATTCTCTTAATAACCATGATAAATGACATACTTTT
AAGAATGAATAATATTTAACTGTGATGAGACTACTGATTTGGTTTAGATTCATCATTTCTAAGTTACTTGACCAACATC
AAAGAAGAACTGGGTCAATTAGTCCAATCTGTGGTTTATAATTGGCCAATTAGTCCACATCTTTGAATCTGCACAGGGA
CCACTTGCACATAAATCTAGATCTACATTTGCCACGCTCCACAAAGCATTCTGAACAATTCACTGTGTTCAAAAATGAG
ATTTCTATTATTTATGCATGAAGAAAATATGCTGTTTTCCATGCACTGAGCCAGGGGGAAAACTACTCAGCCTTGGTAA
TATTAGACCATGGATCTTCCATTTATTTTAAATGATAGTGTCATGCTGAGGAAAATAATGGTTCATATCCTTCTTCTCC
TTCCTCCAAATACTATGTCAAAACTACTTTGATTAAAATAAATAAAATCTTGTATCACTGTGCCAACTCTGTAAGAAGA
CAGAGCAAGCAAGCAAACACATTAAAAACTAAGGTGTTGGAGAGTCTGCCGTGACTTGTGAATTCTGTATATTTTTTCC
TTTCCTGAAGTTCTTATTTTCTTTTCTTTTACTTACCAAGTTACTTGGAAATTTAACAATTTAATAAAAATAAACAGCA
TCTTTTCCCAATATTTAAAAAAATGTATTATTCATTAAAAATTTTGCATTCACAAAAAAGTGAATAATTGGGCTCCAAT
CTGAGTTAGTTTATGAGTGTTCCCCAGGTACCTATCCTCTCTCTTTTGGAGAGAACATGTATTCCTTGAGGACAGATTA
AGAAACTAGTCTTCCCTTAATGCTGGGAGCCTCTTTGAAGTCTTATTTACTTCAGATCTTAAGGGAGAATTGTGGTACG
CTGAAAAGTATCACATTTGTTATCACTTGAGGAAACACCATTTGATCTAATGAGCTAGACTTTTTCATCTTTCAATTCA
TGACAGCTATAGCTACATTAGAAATTGCATTTTGGAGGTCTTGGATAATTATCTAAAAATATTCACAAACCCCTTGGAG
GCTAATGAATTTAAACTTGGATGGCTAATCCTAAAATGGCTTTATTCCAGCAAAGTGGGAGAGAAACTCCCCTTCTTCT
GTTTATTTAAGGTTTCTAGTTTGGGGTCCTGGTTCTAGTTTGGAGTCCTGGAGTTCCTTTCAATGTGTTTCCATAATAG
CCTGATTCAGAGGAGTCGGGGAGAAAGAAAGAAACAAAAAGAAAATGCCTTGTTTATTTTATTTACATATATACATACA
TATCTATACATATGTAAAATGCACATGGTAAAGCATAGTATTTTGCACAAAATCTTAAGTAAAGACAGACTTGGGTTTA
GATTTATAATAGGATTTAGTAATACTAATACCAATAACAGCAGCAGCAAATTCTTGAGTGCATGAAATGGATTACTTTA
TGTAATTTCTGCAAAGTCCTATCATGTATATTTTGTCACTAGTTTATTTTACAGATGAGGAAACTAAGGCTCAGCAAAG
CTGTAAAACTTGGCCAAAAAGTCATGCAATTTTTGAGGATTCTGATTTGCTCTGTCTGGTGCTTATACCCATCTTCTTA
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AGAGAGGCAGGCAGGGAACACTGGCCTGAAGTATGAGCTTTGAAACTGGCAGTCTTCATTGTAATCCTGGCTTTGCCCT
TGCTGTCTGTGTGTCCTTGGATGAGTTACCATCTTCTGTGTGCTTCAGTTTCTTTATCTGTACAATCGGGATAGTAATA
AACTAATTTTTGAAAACCAGCTAAAATAATGCCTGGTTCATAGTAAACCCAATAAGTAGTAGTTGTCAATTTATTAGGT
TGGTGCAAAAGTAATTGCAGTTTTTTTTCTATTACTTTCAATCACAAAAATCGCAATTACCTTTACAACAAGCTAATAG
GTATCCTGCCTGCTCTGTCTTATCCCTTTCACCCTTTAGAGCAGCTAAACATTAGACGAGTGCCTCATCCAGAGATTTA
TTGCAATATTTTATACATCAGAACAGTTTGAAGAACCTGAGATAATATTGAGAAGATAGAGAATTTTTCTCTGTCACTC
CCCATCTTCTATTTTAAACTAGTAATTCTCCTCTCTTGCCTGCAAACCCCGCTTCCTAATCCTTAGGCAACTGTCCTGA
GTTCTTGTTAGTTATTACTAATTCCTGCTGTGATGTTCGTTGATAGCTACAATGTTAGATGATAAGGAATATTATATTT
TAAAGTCAGATATTTGAGAAATAAAATTGCATTCTCACTCCAAGAAAAGTTTCTGCATATCCAAAGGATGTGGGGGATA
GATATTTAGGAATATATGTGTGCCAGGATTGGGCAACTCGCAGCCAAAGAATGGAACAGGTTTACCTTGGATTTGAGAG
CTACACACACCACTTCACAAAAATTTTTATCTTAATTTGGTATTAACTTTATTTAACTATAAAACTTTAAAACTAAACT
TTGAGAGGAGGATGAATTTTGTTTTAAAGATGTTTGTAGTTATTTTTAGCTCAGAGTTCTATTTAGGTTCCCCAAATTT
TGTGCTACAACAGTTTTAAAAGTCTGCCCAGTTATTTAATCTGGGGAGATTACAAATACAGTGTTGACGACTGGCCTGC

Fig. 9.151

AGCTCTCTCTTCTGAAATGAGATATTCAACTCCACATGGCTTACTGCCTCTTCCTATCCCACTTAGTTTCCATCTCTTC
TGCTGGTGATGATGTGAGTTCCCTACCCTGTGGGGTTACAATTGCCCTTATGGTTTTTCTTATACAATATTCAGCATTA
TAACATATGTAGGTTATAGAGCATATAATATATGAACTGCAATATTATCAATATGTTGTATCTACCTGTGGGCTCCTTC
CTTCTCTCAGTTACCATATTTTCCTTCACCACTCACTGGGTAACAACCATCTGAAATTTCATGAATTGCATAACCTTTC
CATTTTTAATACTTTAAAAAATCATATATGTATGTATCCTCTAAAATCTTGCTATGTAAGTATGGTCCACAGATCTAT
GCATGAACATTGCCTGGGAGCTTATTAGAAATACTGAATTTCAGCATTGCCCCAGACCTACTGAACCAAAATAAGTATT
TTAACAAGAATTGCTGTTGATTTACAGGCACATTAGTTTAAGAAGCACTACACCAAAATATATTATTTTGTCTTCCTAG
GGGTTGTTTTGTTTGCTTGTTTTCTTATTTGTTTCTTGTTTTTGAGTGTTATAAGAATGACATTCTGTTTGTTGTCTTC
TGCTACTTGCTTTGTTTGCTCAACAGGGCATTTTAAGATTCATCCAGGTTGCTTTCTGTAGTTGTTCATGGCTTCCTGA
TGTAACATTTGTGCTAATAGTCCTTCCTGCTAAACACTTAGTTTGTTTCTAGCTTGTGTTATAGTGTATAATCCTGCTA
TGAACAGTCTGGTGCATGTCTCCGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT
GTGTTTGCATGTAAGACATTTTCTGTGCTGTGTACCCAGGAGTAGAATTATGAATTGTAGTGTATGTGAATGTTTACCT
TTACCAGATAATGGTAAATTGTTTTACCACCAGCAGTATATGAGTTTTCATTGATCTACATCTTTTCAAATACATGGTG
TCATCAGGCTTTTTACTTTTTGCTGACCTAGTGGACATAAAATGTCCTCTCACTGTGGTCTTTATTTGCATCTCCCTGA
TAACTAATGAGATTGGTCAATTTTTTCATCTATTTAATTACCATTCTGTTTTCCTTTTCTGTGACGTGCCTTTTCATGT
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GTTGCTATGTTTTCTTCCAATTTATGACTTATCCTCTCACTTTCTTGATCACTCTTGAATAGAAGTTCCAAATGTTAGT
ATAGTTTATCAGTCTTTCGCTGTAACTGCTTTTGTATCTTTTAAAAAAATCCTTCCTTGCATGAATACTATAATACTAT
TCTAATAATTTCAGTGGATGGGTGGTTTAATACATAATTAGAGCTCTAGGATGATATTAACTGAAATATTAAACCAGTC
TTCAACTGGTATTCTTAAATAACTCATCAATTGGCATTTTACTTTCAAAAGGCCTATGTTTAATTTCTCCCATTTGTCA
TCCAGGCAAGATCACAAGTTTTGGACTTAGCTTGACGAGGCTCAAATCCAGGCTTTGAAACAGCAAGTATCTGACCTTA
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CCGTTAATTACAATAGTTGAGTCAATTTAATGGGAGCTTTTTAAAATGAGAACTATTAGTTTAAATTTACATTTTCTTA
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TAAATCTTTTCTACATTAAGAATCTAAAGATCTTTATACAGTTTTAGCCTTTGGTAGTTGGGCCTAATTTCAAAGTGAC
AAGCTCTTTCATGATCTCTTTTACATTTTTGAGATCAAGAGTGACATTTCAAGGCATATTGATTCATTTTTATAAAAAA
TATAATTATCAACCACAAAAAGTTAAACATCTCTWAAAAGTTAGCTAAGAGCTTGTGACAGATGGACATTTAGCAACTG
AGTAATCATTCTTCAGGTCTCACAAATCTGTCACTTTGAAAGTTCTATGACATCTTCTGAGGGATTTGGTAATATCTAC
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ATATCATTCTTATGAATATCTTGTTGCTTTTCAATAAGATATGGAAGTGCAGTTTTTCTCCCAGGAAGAAATATTTTTT
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TATTAATAATTATAGTATGAACTTTTGAAGACATTTTAAGTAAATAGTGTATATATATATATATGTGTGTGTGTGTGTG
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GTTGTGCATTACCACACCTGGCTAGTTTTTGTATTTTTAGTAGAGACAGGGTTTCACCATGTTGGCCAGGCTGGTCTTG
AACTCCTGACATCAAGTGATCCGCCCACCTTGGCCTACAAAGTGCTGGGATTACAGGCATGAGCCACTGCACCCAGCCA
AATAGTCTTAATTTAGTTAAGTGCAAAGTTCATCAATCTGTAGCTATATGAATGCAAGTCAGAAATCCAAAGTCCTTAC
CATGACCAGCATGGACTTCCTTGATCTGTCATTTCCAAACAGCTTTCACCTGACTTCATCCCAGGCCACTGGTTGATTT
ACTATTCCTCAGCCATAACAAGCTGGCTGCCATGTCTTTGCACTTGATTTTCCCACAGCCTGGAGTGCTGGCTTACTCC
CTTGCTTCCTTCAGGCCACTCTACCATTACTCTTTTGGATAAGCCTAACTTGCCAGCCAATGCAAAATAGCACTCCCAA
ACATCACACTCCAACTTCTTAATTTGCTTCAGTTTGCTTCATAACACTGAGCTCCTGTATCTGATATTATTATTTATAT
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ACGGGCTATTCTCAACATTGGCAGAGGACTAGCACAGTTCTTTAGTCCCCACTGAAAGACTCATCCTGATCATTATAAT
GTTAAAATGTGATGAAAAAAGCATACTGTTGCAAGAATTAAATAAAATAATGTATGGAAAATGTTTGCCAGAATCAGAA
TATCAAATGTTAATTGTTCAATAAATGCAATAAAATTAATTCCATCTGAATCAATCCTTACCCCTTCCTTTCCTGTAAC
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TTCTCAGGGACAACATATTGTTATTTTCCTTCCTTCTGTCATATCTGTTATTTCTCCCTCTCTTTGCATCCTACTCATC
AACTTTAAAACCTGCTCCACTCAGAAGGGGGTCCTTTTGATAATGTATACAAAGTCACTACATTGCCTTTAGGGGACAC
TGAATAAGAAGTAATTCTTTATCAGGCTTCTGCTTATTGCTCAGCTGTCCTTGCAGGTTTATAGACTTATTTGCCATTT
TCTGAATGTCCAATGCCCCACAATATCTCTCATCTCTAAGTTATTGTCTGCGCCAGTCTCTGCCCAAAATGCCTTTACT
CCTTCATCTCCCCAAGACGTACACACATTCATGGTCACACATATGTATTCACACATACTGAAAATAGCTAATTTCAATG
TGTACTTGAGGTCTTGGCCTCAGATTAGATGCCACTCTCCCTTTGGTGAGGACTCACTGAGCTGTAAGGGTTGAATGTT
CTTCCAGCAGACACTACATATCCGCATCAGTATATCTCTTCCCCCATCTTCCCAAATTATAGTTGCTTATTTATTTAT
TTCCTCTGCAAGACACAAAACTCCTTGAGGATAGTAATTTTTTGTGCATGTTTGTCAATGCAGTATCACAGTCGTCCTG
AGAATTAGCACACAGTAGATAAGCAATATTTTTACCTTGAGCTGACAAGTGGAATGGTATCATTAGAAAGTTACAAAAT
TGATTTTGTGATACTGAGCCTCCAACTAGTTGGAAATTAGTGTGCTGCTAAATTTGCATTAGTGTGCTAGTCAAAGACA
AGGATATTCAAGTACAGCATTTCTTAGTTTCATATTAATTGCATATTTCTGTTTATTTCATATTAGACAAAAATTACTG
AAAAGCAGCCTAATATACTGCGTTGGAAACAATATGATAGAGACTTTAATACTAGTACTTGTACTGRCAATACTGACAA

Fig. 9.152

TATTATCTTGTATATGTATAGGTTTTTACAAATTTAAAAGCCTTTCATATATCTCAAGGAAATATCCTAAGAACCTGTT
TCTACTCAACATTAAAGACCTAAGTGAAATCTGAGACTTTCAATGCCTTTGGATATGTAATTAGACAGGAGTTTAGCCT
TTTGTAACACATATGATGATGAAAATTTCCGATTTTAAGCTGACTGTTGGGCATCAAGATGACCATCTTTACAAATGAA
GTAGCACTCATGCGCTCAAGTATACATAGAATGTATGCAAAGTGAAAGTCTCCTTTAAATCTTCCTCCCATTGACTTGA
GCAACGAGAACACGTGGACACAGGGAGGGGAACATTACACACTGGGGCCTGTCGGGGGGTGGGAKGCTGGAGGAGGGAT
AGCATTAGGAGAAATACCTAATGTAAATGACAAGTTAATGGGTGCAGCAAACCAACATGGTACATGTATACCTATGTAA
CAAACCTGCACATTGAGCACATGGACCCCATAACTTAAAGTATAATAAAAAAAGTAAAAAAAAAAATCCTCCTCCCATT
GCCAAGATAGAAATGGACCCTTAGTTACTGCCACTTGCCATCTCACTCTGTGTTCTGGATAGAAATGGTGCTTGCTCTC
TGCTAGCTGTTAATTGACATCACTTCTGCCAGAACTCTCCATCATTATTGACAAGAATGTTCTCCCTTGTTAATTGCCC
AGCAGCACATTGAGTGATTGATTGTATCTTTTGGACAGATTTGAAATGCATTTGCAGAAAAGGGTGGGGGTGGTAATGA
CATAATGCATGGTAATGACACCAACTAACTGCTTATTTAAGTTTGTTCAGGAAAAAGATACTGATCATTTACCTGATTT
TTACTTTTTATATAGATGTGCTAATGGTAAGTAGTGATAGCTTTCCAGGATGTCCCACATTAACCCAATGCTTCACAAA
AATCTCTCTCAGACTGTGCCCATAAAACTCCAAAATCTATGGTCAACTAGTGGGAAAAAGAATGGATAATTTATTTAAC
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TTAATGAGAAGAGTTTTTAAATGGAAGGCTGGGAGTGCTCAATATTCAGCAGTATAAGATTTTCTTTTAGCATAGAGGC
AACTAGAGTAATACATAAAGTGCATATTTTCATGAGAACTTTGCTTATAAGCTGGACTTCCCTAGAAGTATTTGAGACA
CAAGGGCGAGTCAACTAATAGTATCTACAGTGTTTTTGCAACCATTTAATGAGAGAGTAAGTCTGGATCAGTAGTTGCT
GATGTATGAAATCACATGAAGAGTTTTTTAAAATGCCGATGCCTTGATCCTCCCCTAGAAATACTGATTTTATTTGTCT
AGGCAGGGTAGTGATGATCAAACTTTACACTGAAGCAGCATCTTCTCACAAATTTGGTAAAAGTATAAAGCCTCAAGCC
CTATCCTGCTTCATGGAGCCTGGGTCTTTGTGTGCTGGATTAGCTCTCCTGGTGATTCTGATAACATCAAAGTTTGGAA
TCACTGCTCTAGGTTCAACATCAGACATTTTTTTCAAGCTCCCCCAGGTGATATTCCCTAGGTACAGCCAAGACTGGG
AACTGCTGATTAACATGATATTTAGGATACTTCCCAGCCTGGCAGGAATAATAAAAATTGCTACCTTTATTAAACATTC
ATTGCATATAAGGCATTGTGCTAAGTATTATTTCATTAAATAATTGCAAAATTCTGTGAAGTAGGTAATATTAGTACTA
CTTTGCATATGGGAGACAGGGATGGTAAATAATTTAGCTAAAGTAACATGGGTAGGAAGTGGTAGATTGGAACTCAAGC
TGTAACCTCAAAGATCACACAAGAAACTATTACTATCAATAACATTTTGGAATTATAAGTTAAATTAAAAACTCTACAA
GTTGGAAACATATTAAATGATTTTCTTACATTTTAAAATGTTCCTGACTTGCAATTACATAGTAAAAACAAAACAAAGA
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TCAGGTTGGATTTGAATTATTCCAATTTAATCTGGAAAAAAATTATAAGTCACTTGTACTGTTAGTRTATGAGAAATTA
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AATTTGTGTACTTCTTTAAAATGGTTTTGGATGTTAATAATGCAATGAATTAAAAGAAAAAGGCAGTCTATACTGCAGA
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TGCCACCAGTCACACTTGTGTCTGCAAAAGGGGCAAAAAGAGTGCCTTTGTAAAGTATGGTTTAATCCTACACAGTGGA
GAGTGGTGCTTAGGAGATTGCCTTGTTTCTCTTAAGACACAACCTTTCTCAGATTTTGTGTATAGTCCACATATGAGCA
GAGGGCTCATATTAAACTGATGGAGGAAAGGTATATTTCCAACCATAAATAAATAAATAGCATGAAGAGATGATGAAGG
CCTTCTCCTGCCACTTGCACATTTCGTGGACTGTTCTTGCTGATAAACAAAGTGAGCACTTATTTTCATTGGCATTATT
TTCCCAGTGGCATCTAGACTGTGTGGAGAGTGTTGAATTTTCAGCAGTCTAGAGAGTTTGAGACATGGTTCCTGATTCT
GGTACTCTAGCATCCATTACATGATATGCTTGAAATGTACATATGAAAATATGTTAAGACTGAGTGTGTGGGAAGAATA
GAATAATTACACAGCCAACAAGTTGTTGTGAGTCCTAAATATATTATCGTTCAAATAATGGATGGTACGTGGTAACTTC
CACAAAGAAAAAATTCTAGAATTATTTTAACAGTAAGCAAATTGCATTTCATCTTTAAGTAATATGGTCAAATAAAAAAG
GTACAGGGAAAAAAAGTGTCTATATATTGCCCTGAAATCCTCTTGGCTTCTTTAAAAAACATTTGACACTGCAGGAAAAT
GCTAATTAAAGGAAGACAAAAGTTGAATTTGGATTCTAGTGCCTCATAGGACTCTAATTTCTGTGAATATTGATACAAC
ATGTTTTTAAAACACTTTAGTAATAGAGCTGTGTTCTGCTGGAAGTGGCAGAAAGGCAAATTGCAGGCAGGCACTGAAG
ATAGAGACTACCGAAGATAATCAGAGGTTTGTAATTGAAAAGGTGCCTTAACCTTAACTCTGGCCAGCGGGCTCAGCCA
TGGCTCTGCAACTAAGGACGACTCGCCTTGATTTCCAGCGAGGACCACTCCCGAGGCCAAGTTGGAGGAAGATCTTCAA
GAGGAAACATTGGGCATTCTCCCTGCTGTGGGAAAGAGCCACACAATGTTTTATCCTATGTCAGGGAAAGAGACTGAAT
TAATCTTACTATTGGATCTTCACCCAGATCCAATTTTTCAGCGACGCGCATAGACAATATTCCAGGCAACTTTGCCTGG
TCACATTCCTTATCTTTGGAAGCACCAGCATGGGGCTCATCGTCAACAAGCTCTGAGAACCAGCCAGGAATCGCCAAAC
TCCATTTCTCTAAGAGCACTGAGGCAAGCGGAGGTGAAGAGGAAGGCTCCGGGGCAGTGGGGAGCAGTGTGGAGGAGGG
AGGCGCGGGCACGGCGAGGGGAAGGATCAAGAGGACAGGTCTGACTCCTGACTGGCTGGAGTGGTTTTGGTGAAAGTCA
CAGCTCGGGCGTGCCAGCCTGGAGCTGTCCAACTTTTCAGCAGCTCCGGGATCAGGGTTCCGGTGCCCTGGAGGCGGCT
ACCACTGCCGCCGCCGCCGTTGCTGCTGCTTCTGCAGCCCGAGTTGCTGACAATCCCTGCTCTCGCCGCCGGCGCCCAA
AGGAAGGGAAGAAGAAAGGGAGGAAGAAGGACCAACCTCTGGCGAAACCGGGCACCGCGCACCCTAGTCTTGGTGACTT
GGGGAGCCCGGGAGCGTGTCTCTGCCATAGCCTCGGTGGAAGGAGCCCTGCCGCGTTCTGTGACCCCTCCCGCTGGCAG
GGCCCCCTCTCGGTAGCCCTGAGGCTCTGGCGCCTTCAAGTGAGAAGCTAAGCACCAGCCTCTGCTGGGCTGCAGAAGC
GGCGGCGGCGGCAGCAGCAGCAGCAGCATCAGGAAGGCGCTCGGGCCAGCGCGGTGAACCCGGGCTGGGCAGCAGGTCG
CGGAGCCGCGAGCCAGGATGGAGGCAGAGGGCAGCAGCGCGCCGGCCCGGGCGGGCAGCGGAGAGGGCAGCGACAGCGC
CGGCGGGGCCACGCTCAAAGCCCCCAAGCATCTCTGGAGGCACGAGCAGCACCACCAGTACCCGCTCCGGCAGCCCCAG
TTCCGCCTCCTGCATCCCCATCACCACCTGCCCCCGCCGCCGCCACCCTCGCCCCAGCCCCAGCCCCAGTGTCCGCTAC
AGCCGCCGCCGCCGCCCCCCCTGCCGCCGCCCCCGCCGCCGCCCGGGGCTGCCCGCGGCCGCTACGCCTCGAGCGGGGC
CACCGGCCGCGTCCGGCATCGCGGCTACTCGGACACCGAGCGCTACCTGTACTGTCGCGCCATGGACCGCACCTCCTAC
GCGGTGGAGACCGGCCACCGGCCCGGCCTGAAGAAATCCAGGATGTCCTGGCCCTCCTCGTTCCAGGGACTCAGGCGGT

Fig. 9.153

GAGTGGAGAGCGCCCCCTCCCCCATTCAGGCAAAGGGTCACCTCCCCTTTTCTCAAATACTCCATCTAAGTCGGCTTAT
CACCACCAATTCTAGACCCAGGGTAAAATGCTAGTCTGGAAATTGGGGGAGGACAAACAGGGGTGTGCCTATCCTTTAT
TGAGAGTATGCTATTCAGGTGTGTGTAAGAGACCCCCCAAAAGTACTGCATAAATGTTAACTGGGGCCGTGTGTGTGTG
TGTGTGTGTGTGTGTGTGTGTGTGTGGTGCGCGCGCTTCCCAGTTATCTGTGCCACGCACCAGCCCTCTCCCCACCCAC
TTCCATACCACCCTGGCTAGTGAGACTAAACAGGCAAAATCAGTTTGCTCTGGGTGGAGAAGAAGAGAAGGTGAAGGTT
TTGCGGGATTTGACCAGCGAAAGCACCCAGCATCTGTCCACTCACCCTATTGGGAAGAGGGTCGGTGGGGCTGCTCTGA
CTGGGGAGGAGGGGGGAGTGAGAAAGCCTGGTCCCAGGATTGCAGCTAAAAGCCTAAGAACAACTCGCATTTCTCTTCG
TCAGGTGGAGAAGTAAATTGAATAGCAAAAGGGGAGAACACGTGGGTGACTTGGAGAGTTTGGAGCAAAATGTTCAGCA
ATCCTTGAGAGAGACAAGGGGGTGAGGGAGGGAGAAGGAGCGAGGACGCTGTGGGAGTTACACTGTGTCGGTGTGTGCG
AGCTTGTGTGTAGGGAGACCGTGTGTGTATCAGTCGTCCCTGCAAAATCCCAGGAAGAAAGCGCCTTGTTTTAGCAGCA
GGCAAGACGTAGAGATTTGATTATAGTGATTTCGCCTTAACGTAAGTGCTCCGGAAGACAGGGCAGGGAAGCCGCCTAT
CAACCGGGAGTTTTAGTAGAAGTTGACCGCTGCTTCTCCAAGGAAATGAGTAAAGGACCAATTACAGCCATTCTGAGGA
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GCTGCTGATCCTTGGCACATCTAATAGTAAAGTAGAGGGGTCGTCATCTAACCTTAGATGTGGACAGGCATCGATGTAC
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AGGGCTGGGATTGTTTGTCCAACTCTGATTGACAGTAGGTTGGACTGATCAGAAAATCATAATGGTGTTCAAATGTGTG
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GCCAAACTATCATAACCCTGATGTGTACACATCATTTCAGCTTGCATATATGCTCTTAGCCCTTTGCCTGGCTCACACC
CTTAGGTACCTTGTTGGAGATGTTCTTGTACCTGTTGGATGGGAAGAATAAGAATTGTAATTAATAACCTCAATTCAGA
TCAAAGACTGCAGACTTTCATAAATTAATATAAAAGTTTCATTTTTCAGCCAAGACTGCTAAGACCCTTTGTTTGAAGA
GGTGGATGTCCTTCTCTCTCCCCTTTGGTTGAGCACGACACTATGTAGGACCCCAATGATAGAATGAAGGCAAGCCTGA
TACTTTGTATATTTGACCTATTAATAGAAAAATACCGTGTGATGATGAGCCCTTAATAAACATTAAATAAGAACAAGAG
TTCTAGCTTGATCTGTGGGCTGATTGATTTTGTAGAGTTTCTTAATTGACTTCATTTTTTAATAAAATAGAATATGCCT
GAGAGAGTGGAAGAAAGAAAAATAAGCTAATTGGAATAGAGGTATTGCATCATTGATTTGAATTTATTTTTTGCTATGC
TTTCTACATTGATTAATTGTTCTATTTGAAATTTTTAGTTGAATGGTTCACAGGCAAACTAAGATGTATAATATTTATA
TGTAGCTGCCACTGTGGCTCACCTGATATATCATTGTCATTCTATTTAAGGATCCTTAGACTTAAAATTCTTTACAATA
CTTGCATATTCCCCACATGCTCACACATTGCATGTCATGTTTTTCCTTAATAGAGTTGCTTTTGCAAATAAATACATCT
TTAAGGAGGACATGGATATTAGTTTCATTCTTTAAAGAGAACAGCAACAATACTTTTTTATTTTAAAGAGAACAGCAAC
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TATCTCTATTTGATAGACAAGAATGCTGAGCCCCAGAAGATGCGAGCAATTTGTTCAGTATCACATAGACTGTGAGTGC
TAGAGCTAAGACTGAAACCCAAGTCTCCTGCCTCATCAAAGGTGGTGAGCCCACCTTAAATAAATGTGTGCAGAACCTG
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ATGAACTAAAAATGAGATATGGTTTAAATCCATTTTTAACAAAATGACATATATCACAAGCTTCTAGAAGTAATTAGAG
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TTGTAAAATGCATATAAATACTTATGAAAGAGTGTTCAGATAAATTAAAGCTAGTGAGAACATCTAACGTCTTTTTCAA
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TACCATCATCCAAATGGGGGGTTTAAATAGTCTATCAAGTTAATGTCTCTGAAAAAGCCTCATGGGTGGATGGATGAAT
GATTCCCTATGGATTATCAAGAAAGGTATATCTTTTATAAAGCTATTTCTAGCATGCACTGTAGCATTTCCAGATATTA
TCTTGGCTGAAATTTTGAGAATTTGTAACAGTTTGTGAAGCAATGGGAAAGAGGAATCTTGTTTAATGAAAAAATGTAT
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CTGGGATTACTGTCATGAACCACCATGCCTGACTCAATTTAGGTAGAAGGAAAAGAGCTAAAACCTATAATCACACAAA
ATATAAATTCTGCGCATATTATATTTACTTGACATTAGCTTTTTTTTTTTTTTTTTTTTTAGACAGAGTCTCGCTCTG
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CTTGGCCTCCCAAGTAGCTGGGACTACGGGCACGAGCCGCCACGCCTGACTAATTTTTTGTATTTTTAGTAGAGATGGA
GCTTCACCATGTTGGCCAAGCTGGTCTCAAACTCCTGGCCTCAAGTTATCCACCCGCCTCGGCCTCCCAAAGTGCTGGG
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TTGTAATATTTAAATAATAAAAGAAATTAGGTTTTCATTTTTCTATGCTAGGTTATAAAAGCTATTTCTTTATTGTTTT
ATTGATTTTTCAGGTTATTAGTGTAATTTTTTCTTCATTAAAGGATGTAACGGTAATCTAGGTTCATGATGTAAAATTT
AGATTTCACATTACCAAAATAATTAATTGAAAAATTGGCCGTTCAGATTGTCTACATCAGTGAATTTGAATTTAGGAAA
CAGTATCTTTAAAAAAAAGCATATTGGAAAACTGACATAAGGTTGACATCTTTAAATTTTAATATGTAAGGACACTAAG
GATATTTAAATAGCAAAAAATGCAAGGAAAATGTATATTTTTTACATTTCCTACATATTGTCAACACAGTAACACAGTA
TTAGACTTTTTAATTTTTTCAAAATTAGTTTGAACCTTTTATTCTTGATTTGCCTTCAATAGAATATTGTCTTGGTAAC
TTCATTTAATACTTTATCAGCTAGTGTGTTCTAAGCCTTTGATTAATCAGAAAAACATAATGAATCCATCACCTTTTTA

Fig. 9.154

CATTTTGATTCTAAAATGATGTACCTTCTGTGTTTCATGGAAATGGGAGGTGGTGGGCAGAGGAGGTAGAAGGGAAAGG
ATAGGAACAAATCCCCAAGCAGGGAATGTTCCTAAGTCCTTGTCTTATTCTAATTGGATCATCTGGGTTCAGTTGCCCA
CATGTGGAGCAGTAGCATGAAAATAGGTAATTGACCACATCAACAAGACATATTTCTCTAAGATTATGGAATGTCGAGA
AGAGAAGGGACTGAGGCTTAAACTAACCTAGTCCACCACTGTCCATCTTTTACATTTGAAGAAACATGTGTCATGAGGG
GTTAAATTACTTAACACAACTAGTTTACTGCCCAAACTATAACTACAAACTATATCCTCCATATCTGCTGACAATTACT
TTACATTTTACACATTGTGGCCATCTTTTAACCATCAGTAGCCCCAACTTCCAGGTTATAGCCTTGAACCAAAAGTTTG
GAAATTACATTTAAAAAACATTTGTGAATAAGTGGAATATTCAAATATTGGCACAAGAGAGATGACTTCAGAAAACAAA
CATTCTTTCACTTTCAATTTGGATACATTTACACACACACACACACACAAACACACACACACACACACTGATGGCTTGC
TCACTGATTTCTATCTCTAAACTTTAATGTGGGTTTGGAGGCATGTCTTGGGAAGAGTTCTTAAAGATCAAATAGAATA
ATAATCTAAAAAGACTTAGTTCTGTTTATGATTTTGCTAATTATTTAAATGTCTGAAGTCTATCATGGACAAACTTATG
TCCCTCTCACAGCTTATTATCCATCTACAGGTTTAAAAATATGCAATATGTGAGTCTATAACTTGAATGCTGCTAGTAC
TGGCTCATAACAGCAACGTTGCTAAGGGATTACACCAAATAGCACTGTATTATATTTCAAAAGATGTGGCTATTTTTAT
CCTGAGGAACATTTTATCTACGTTTAAAAATAAGAAAACTGATTTTTCCCGAAGAATAAGCCACTTTACCTTATTGTTT
AAAACTTATCAGCTAAATTGGTTGGACCCTATATTCACACATACCACCATTGCCCCAAACCTCACCATACCACTTTGGA
GATTGAGAACTCTATAAAATTTGCTTTGTCATCTAAATGAGCATTTATAATTCTTGCTCCGTCTCAACGTGGGGCATCA
CATCCATCCAGTTGTCTCTGGTCTGTGGCATTCTTAGACTCTTCCTCTCCCCTAACTTTGGATCTCAAAGACCACCAAG
ATCTTTTGAATCGTCCTCAGAAATAACTCTTGTGTTTTTTCCTTGCCACTTCCCTAGTTCCAGCACTTATCCTCTATTC
ACTAAACTATCGCAATAGCCTCTAAGTGATCTCTAGCTCCAACCTCTCCTCATTCCTGTTGTTCCTTTTTTTTTTTCAC
CCCAGGCTACCAATTTCACCACCATCTTCTAAATCTTAAGGTAATTTCTCTTTGCCTTCAAGATAAAGTCTAAATTTCT
TAGTTTGACTCTTCAGAATGTTGGCCCAGTCGGTCTTTCTTGCAGAAAGTCTAACTTTTGTCCCCTTTTGTAAACCCCA
TGAAATAATCACACTTAAATTCTGGCCGTGGTCTGAGTTCTCTGTGCCTTTTCACACCTCTCTTTCTTGCTGAGGCTGC
TTCTTCCTTCTAGATTGCTTTCCCTATGCTCTGCAACACCCCTTCCTTACCTGTTCAGAAAACTCATGAATATCTTTTC
AAACTCAGTTCATGTTACCCTCTTGCGGATATTCCTACACAAAGAAGGAATATTTTTCTTTTCTTTATTTTTTATTTT
TTTATTTTTATTTTTTATTTTTATTTATCGTCCGAGCTGGAGTGGAATGGCGCGATCTCGGCTCACTGCAAGCTCCGCC
TACCGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGCCTGCCACCATGTCCGGCTAAT
TTTTCGTATTTTTAGTAGAGACGGGGTTTCACTGTGTTGGCCAGGCTGGTCTGAAACGCTTGACCTCGTCATCCATCTG
CCTCGATCTCCCAAAGTGGGAATATTTTTCTTTTCTGGGCTTTCCCATAGCTTTCGTATATTATTTGTACTCTAGCAGT
TATCAATTGCAGTTTAATTATTTGTTTTATGTGTTTCCCCCATTAGGTATATTAGGACCTTGCACAGTGAATGGTTTTA
TATAGATTTTTAATAAGTGGTGAGCTTTTAAATGTGGAAATAATAATGAAACCTTGTCTTTTTAGTTTGTGCTCTCTCA
GACAGGATATATTTGATTTTCTTAATAATCTCTTTGAAACACACAGAGTTAGTGATTATTTTACCCATTTTATAGATGA
TGGAAGGGAATATTGAATCTCAGAAAAATAGACACATATTCATGTTCAAAGATAGAACTTGGACTTGAGCCAAAAAGGT
CTAGTGATCTTTTTTATTGTAATGTAATGAAACAAGAGATACTGTGAGTATAGGTTGGTATGAGGAGAAGCAGCCTATA
ATTTGAGTTAAGATTATGAAGACAGAGTGAAATTATAATATTATGAAGAGAAATAACAGTTTTGATCTAACTTATGAAA
AAAAAAACAACATGTAAGAGTGAAAATAACTCTGATGGGATAAAGCCCCCTTTGTAAATTTAGAGAAGTGCCTCTACAG
AGTAAATTCTTAACCTTGGGTTATGTGGCTCTACAAGATTCATTACATTTGGAGGTAGGCACACATTTCTTAGAGAATG
TTTATCCAATTCTCAATGAGTCTTTTATCCACAAAATTTAAGGCACTGTGTTCTAAAGCTAAGTTATTGACTGCTTCAC
TAAGGGAAAAATTATGAGAACATAGTATACTAATGGAGTAAGATTATCGTTGGGGTGGCTGAAAGTAAGCAGTTTGAAA
TGGGATTTTAGAAAAATGCAACACTTCAGACAGATAAGGTCAGAGGCTTATTTAAAAATGACAATCCCCAGTGGGATTT
TAGGGGATTACTTGACTTAAAATTTAATTTAAATATAAGGATAGTAAAGAACATTTTGAAAAAATAAAAAGACTGTTTT
TCCTTATAAGATAGCAGAACATATCATATAGGCTATTAATTCAAACAGCATGATAATAATTTAGAAATAAACCAATTAT
TCAACCAACTGGATAAATGGTCAAGAATAAGGCCCATGCATATATTGAAAATTTAGGGTTTAGTAAAGGTAGCAGTCCA
AATCAGTGAGAAAAGGATAAATTATTTAATATAGGATAAATTGTTTAATGGTTTATGGAAATAAAAAATGATCATTACT
TCATTCATACTATAATAAAGAGCACTGGATAAAAAAGATTAAAAACTCAAGAGAAAAACAGATAAAGGCCATGAACAGA
AAATTCAAAAAGGAAGAAAAATGTATGACAAATATACATTTGAAAAGTTTTTCTACCTGACAAACAGACAAAGAAATAA
AAACTGAAACAATTTTTCATCTATCATTTTGGAAAAAGATGAAAAATTTAAAAGAATTTGAGATGGTATACAGACATAG
CCACTTTCTTATGTACATTTTCAGTGAACAATATATCAGGAAATCAGGAAGTATAAATCAGGAAAACATTGGTGGGTGA
TCAAATAATATATATCAATATTTTAATGTGCATACTTTTGTCCCATTAATTCTATGTTTAGAAACTTAGCCTAAGAATA
TAATTGAATAAGTGAGCAAAGAAATACTATATTGCAATATTACATATAATAGTATACATCTGGAAACCACCCAAATATC
TTTCAGGACAGAAATTGTAAAATAAATGATGATATATCTGTATTGAGATCTGTATGTATTGAAATTATTGAAATGTTAT
TTTAAACTCTACAAGTTGTTATGTGGAAAAAGCAATTTAGAGAATAGATGACAGAATATGGTATCATCTACCAGTGTGT
TTTCATGCATGCTTATATTTACATATATGAGATTATGTCTATGTACATGTGTGCCTATAGTTATGTATGTAGGTGTATG
TGTGGTATGTGTGTGTATATATATATATGTGTGTGTGTATTTATATCTATATACATATATATGTAGAGTGAGAGAGAGACA
GAGACAGAGACAGTACTACATATATATGTAGAGAGAGAGAGACAAAGACAGAGAGAGAGAATACATATATATTCTGTCT
AAGCAGGAAAAACCACCAAACTGTTACAGGTGTGTGAAGAGAGGATATTTTGAGAGGTCTTTGATTTTGTTTTATGTTC
TCTTCTCTTACTCAATTTCCTTTAAAATGAGCATGTGTTGTTTTTATAATAAGCAAAAATCATGTATTTTCTCCTTTTG
TAAAACAATATTTTCAACTTATTTCGTTTAATATATTTCACTTGTATTTCACTTGTTTCTTACCCCCCAAAAAAAAGCA
AAGGATTGCGTTTCATAAAAAAAATTTAGTAAAAGATAAACATGAGGACATCAAAGAGAAGAGAAAATGGCATGAAAATA
GTATGAACTATGAAAGCAAAAATTCATTTCATTAATTCCTGAGTAATTGCTAGAAACGAGTCACAGACTGGTTCTGATC
TTCCTATCAACTAATCCAAGGAAGGGAACACTGTTGCTTTAAGATTCATATATCGGTAAGTTAAAAAATGAGTTGCTTG
GTAAAATATATTGCTATTAACTCTGAGAGTTAAAAGAAATATTTCTCTGTGGTGTTTTATAAAAAAGATGCTATGTGAT
ATGGTGTGTGCAGTTTCAACATTTTTTCTATACTTCATAAAGTTTGAAATAGATATAAATGTTTCTTATAACTGTGACT

Fig. 9.155

GATTCTTATAAAACTACACATTGATGGCCTGTTGTCTAAGTTCCATTCATTGAAAATCTATCAGCACTGGAGCCCCAGT
TAGCATTCTTAACAGGGCATTCTCTTTAAGACTGAACACTAAGTGTGCACCATTAAAAGAAGCTGCATTCTTCAACTTG
GAAAATTCTTCTAGACTCACTCTCCTGTATCCCACGTTCAGCCTCTTGTTCTCACCTGAATACCCGAATTTGATTTGGA
TGCTGTATGTGTTCTCTGGTCCTTAAGATTAAAAACTAAGGTCTTATTTTAGTTTCTTGCTCAAATATTGCTTTTTTGA
CCTGCTCTGTTCCTGTAACTGTAGCCCTCAAGCAAGCCCAACCTAATTCTCAAGTGTGGCTCAGAATTCTGGGACACCA
GCCCAAATTGGGTCTTCCTTATTTGTGATAGAATGGAACCAAAGGAATAAGAGAGGCTGGGCATCTTGGCTCACGCCTG
TAATCCCAACACTTTGGGAGGCCAAGACGGGCAGATCACTTGAGGCCAGGAATTCAAGATTAGCCTGGCCAACATGGCG
AAACCCTGTCTCTACCAAAAAATACAAAATTTATCCAGGCATGGTGACACATGCCTGTAATCCCAGCTACTCAAGAGGC
TGAGACACGAGAATTGCTTGACCCTGGGAGGCAGAGATTGCAGTGAGCCAAGATCGCGCCACTGAACTCCATCATGAGC
AACAGAGTGATCCTCTGGTATTTTTTCTTAAAAAAAAAAAAAAAAAGAAGGAAAGGAGAATTCAGTGTTGGTATCCAGC
TTTCTGATTTTCTGACATGAACACCCCATTGTCTCGATATTTATAACATATCCACTTCCAGTTGAATGCACCAAGATAA
TCTAGTTGCAAAATGTAGCCCCATTAAATACATGGATTGACACATTTAAATATAAGCCAGTTAAATGTTAGAAGTTACT
TACCAAAAATGAGGTTGATGTTTTAGAATAATTTACTCACAGCCCTTCTCTCTGAAAGCAATTAGAGTAATACATTTTT
AGTCTATCGAGATTGTCCAAATTCATGATAACAATATTACCTAGTATGCAGGTGTGCTTCCAGCTCACTTGGAAGCATT
TTTAAATCATTAAAATATAAAGTAAAAGTTTGGACTCTTCTATACACACATTTTTATTTTACTACCACTCAATCATTCC
CACCACCTGGGTTTTCAGTTTTATTGAGGACCAGTTTCTTGTCTAATGATCAGTAGGCAGGGGTCTCTACTGTCCAGAA
ATCATGTGGTTACTCATCACGGCAGCTGCTACTACAGACACTGAAGAAAGATCATCCAACATGGATAAATACCCTGTTC
TTATCAGATGTTTGAGAAGTAATAGAGTATAATGATGCCCCTCATGTAGAATATGGTTCTAAGAAACCCATACTTATAT
TAACTCAGAAACTGCCATAAATAGCTGAAATATCCAAATAAATCAACAGACCCACAGTTTGTGAGAAACAGAAGGATGT
TCATGGCTTCAATGGGATAGGCCAAACTTTGTGTTGAATTATGTGCTTCTTTATGTCTTGTTTCCTCTGCCTGAAATGC
CTTTTCCTCCACACCCATTAGTGTTTTATAACACCTACTCATACTTCAGATCTTGATTCAAGCATCACTTCTTTTGGTG
AAGTATTTTCAGATCTCCCAAACCTGTCATAATACCATATAGTGCTCCTTTATATTGTTTATTATATTTTCAATTACAT
GTTTAATTGTATAATTATTGATAAGGCCAATTTCTTTCACCAAACTATAAACTCCTATGAAAATAATGACTCTGTCAAT
TTTTCTCACATTCAAACACAGTATTTGTACATTGCTTGAACTGAAAGAATTATTAATAAATAATTGAACTCCAGGGTTA
CCAATTTTATGAAGTTAGGAATATACTGTTAAAAGTAAGTAGAAAACAACTCCAAATTCAGACAACCTTTACCATGTGC
TTTATTTTATTAAAGAGTTAAAAAATAACTATACAATTTATTTTATGTAAAAGACACTTCAGTTTACAAATGCAAATAT
CACCTCTGGAAATAAACCTAAAGGACAGGAAGTCATTGAAGAAGTGGCACCATGGATTGCCAGGATGATGATGTTGCAG
GAGAGTTATATTTAAGGAGACGGCAAATAAAAAAATGATAATAAGGACATTAGATACTAATTTCAATGTTATTTTGTGT
TTTGTCTTATGATTATTTTAGTGTTTATGCATTATTTAACATTTATTAATAAATTATAAATACTCTGGCTCAATTCATT
CTGTTAGCTTGGTTTAAACATATATAAAATGCCCACAGCTACTCCTGTTATTGGCATCTGGTAGTTCTGCATGACATTA
AGACCCAAAAGTAAAAATAAATAAATTTCTTGACTGAGAAAATAATTGCCAATTCAAAATGGTCTACTAACCTTAACAT
TCATAAGAAGAAGAGTATGTATCATCATCCTGGCAAAATGGCACTTATAATTTCATAAATGCTCCTTTTTAACTTTATG
TATTATTTTTATTTTGGGGGTAGTAAGATGTGGAAGCTGTTAGATAGTCATTACTTCTGTTGACATGGAATATTTTATA
AACATGAAATATTTCACAAAAAATAAAAAACCAGTAATAACAGGTCACATACACACTCAATAATCTCACTATAGCAATA
TTTCAGAAAAAAATGTATTTAGGGAAAACAATTTATGTCTGTTTGTTTTTAGTGGCAGTCATGACATGAGGACCCCAGA
CTCAAGTGCATTGCCATTTACTCCCTGGTAGAATGTGATTTCATTTCCAATGAGCTCAAACATAATGATTATATGTCTT
ACTAATTATACAAAACATGGTGAAGAGGTAGTGTGCTTTGTGATGTCACATATCAAAAATGCTTTCTTTTAAACATTTC
TATCTCCTTAGCTAGGTTTAAGAGATAACAAGATGGGCCACTGAAGTAACTTTGTCAAGCATGTTCAATGTAATATTTC
CCCAGAGATTGTTTTAACTGATTCGACCAAATTAGATTATTGACTTGACAATAATGAACAAGATACCCCTTTGAATTTT
TGTCACTACATCTTTTTGTAACTCATGAAAAATTTCAGGCCAGGCACAGTGGCTCACACCTGTAATCGCCGTACTTTAG
GAGGCCGAGGCGGGATTATTACTTGAGCTCAGGATCTCCAGACCAGCCTGGACAACAGACCAAAACCCTGTCTCTACAA
AAAATACAATAATTAGCTGGGTGTGGTGGCGTGCACCTCTGATTGGTCCCACCTACTCAGGAGGCTGGGGTAGGAGGAT
CGCTTGAGCCCAGGGGTTCAAGGTTACAGTGAGCTATGCTCCTGCTGTGCTGCGCAATCCAGCCTGGGCAAAAGAGTGA
GACCTGTCTCAAAGAAAAAAAAAATCAGAAATGTTTGAACCCATAAAGTAGATAATGAGGACATAGTGGGAGTATGTAG
AAAAGCAATAACAGGCCAGGAGCAGTGGCTCACGCTTGCAATGCCAGCACTTTGGGAGGCCAAAGCTGGTGGATCACAA
GGTTAGGAGTTTGAGACCAGCCTGACCAACATGGTGAAACCCTGTCTCTACTAAAAATACAAAAATTAGCTGGGCGTGG
TGGTGTGCACCTGTAATCCCAGCTACTCAGGAGACTGAGGCAGGAGAATCGCTTAAACCCGGGGAGCGGAGGTTGCAGT
GGGCAGAGATTGCGCCACTGCACTCCAGCCTGGGTGACAGAGCGAGACTTTCGTCTCAAAAAACAACAAAAAAACCCAA
AAACAATAACATATAGCAGTGTTGGCCCTCAAGCAGTCTGGCAGCCTTTTTATTGCTTTGGATGCCGTTTGTGTCTAAG
CATTTGCTTTAAATATTTGATGTAGTTAATTAATGAGTATTTTGGATCTTCTATTATACAAATCTGCCTATGAAAAATA
AATGCAAACAAATTACAAATTTCAAATGATAGAAGACCAAACGGAAATACAACGATAATGTCCTCAAATGTGCACTAGT
AGTTTAACAGAATATAACTGCCATCTGATTATTAAACAGTAGAAATTGTTTAAGTAGATAGTTAAAAACTGTAGTATCT
AATGGTTAGTATTTTCCAAGACAGTAGCCTAAGAGAGTAGTTCAATATATACGGAGTTCCGGCTGTGGAGGATGGGGCT
GGTAAGGAAAAGCAAGAAGAGGAAATAAGGCTTTGCTAAAGATTCCTTAACTTCCCTATAAGATGTTACAGAGGCACTG
ATTGGTTTTAAGCAGGGAAATTATGTGGATAGTTTTGAATTTTTTAAAACTTACTTTGGTAGGGCCGGGCGCGGTGGCT
CACGCCTGTAATCCCAGCACTTTGGGAGGCCGAGGAGAGCGGATCACGAGGTCAGGAGATCGAGACCATCCTGGCTAAC
ATGGTGAAACCCCGTCTCTACTAAAAACACACACAAAATTAGCCGGGCGTGGTGGCAGGCACCTGTAATCCCAGCTATT
TGGGAGGCTGAGGCAGGAGAATGGCGTGAACCCAGGAGGCGGAGCTTGCAGTGAGCCGAGATCGCGTCACTGCATTCCA
GCCTGGGCGACAGAGCGAGACTCTGTCTCAAAAAAAAAAAAAAAAAAAAAAAAACTTACTTCGGTAGATATGTAGACCA
TGGAGTGGGAAGAAATTAAAGGTGTGATTTAGGTGTTTATTGCAGTAAACCAGATGAGAAATAAATGGTGATAGTCTGA
AACTGATGCTGTGGCAGTAAAGGATGGACATGGCAGTAAAGAGATGAATTTAAGAGAGGTTTTTTTAAAAGTGGAAAT

Fig. 9.156

GATAGATCCTGTCGACTGACTGACTTAATGCTATTAGATAAAATAATTTTTAAATTACATGTATTTCCAAAAAGTACAA
TTAATGAATCCATGGCCAGGCATGGTTGCTCATACCTGTAATCTCAGCACTTTGGGAGGCCGAGGTGGGCGAATTGCTT
GAGCCCAGGAGTTCAAGACTAGCCTGGGCAATATAGCAACATCCCACCTGTATTTGAAAAAATAGTAAGTAAGTAAATA
AATAAAAAATCCATAAGTATTTGGACACCTAAGGTAAATTTAAAATCTTGCAGTTTTGTTTTCCTTTGTTCTTTGTAATT
TTTAGCTTGTTTGAGTGGGGGAAAGTTTGAAATATTGGGTAAGGCAAACATTTGAAAAYGCTCATCTGCAGAGGAAATT
TGCAGTGTTGTGGATAGATCACTTGTGTCAATACGTGAAGCATAACAAATGCTTTTTGATTGTGAAAGCATAGGTAGAT
ATATTGCATTTCAGGTCACCACTAATTAATTGCATTAATTTAGTTAAATTGGTTTTCTCAACTCATCTGAAAAAGATGA
AAACTAACACTTCAAACTACTTCCTCTTGGTAACATCATAAAGACAAATGAACTTTCTTTTTCAGTCATTTCCCTCCTT
CCCCTGTTCTGCCCTCTCTCTCTAACTAGGAAGCTACTACACCAGCCTTTCCAGCTTTGGTTTTCTAATCTTAATTATT
TCTGTACCCATCTATCACTGGAAATTCTTCAAACACTGATGTGTGGATGTGTGTGTGTCGGGGGTTGAGGGGTGAGTTT
GGGGAGTGGTGCTGTGTGTTATTGCAAAATTATCCTTTTTTTGCTTTATCTTTAAAACCTTTTGGAAACTTGTCTAAAC
TTTTCTTTCTCTTTTTTTTTGGCAGAATCTTGCTTTGTCACTCAGGCTGGAGTGCAGTGGCGCGATCTTGGCTCACTGCA
ACCTCCTTGTCCCGGGCTTAGCTGATCCTCCCACCTCAGCCTCCCAAGTAGCTAGGACCAGAGTTGTGTGCCACCAATG
CCCAGCTAATTTTTGTATTTTTTTGTGGAGATGAAGTTTCCGGAGATGAGGTTTCACGTGTTGCCCAGGCTGCTCTTGA
ACTCCTGGGCTCAAGCTCCGCCTCCCAAAGTGCTGGGATTACAGGTGTGACCCACCATGCCCTGCAAACTTATCTAAGC
TTTTTTTTTGTTCTTCTTCTTTTTTTTTTTTTTTTTTTTAGGTTCTGGCATACATGTGCTGAATGTGTAGGTTTGTTAC
ATAGATATACATGTGCCATGGTGGATTGCTGCACTTATGAACATGTATGTTTATTGTTTAAGCTTTTTTATCCTTTTTA
TCAATTGTATGTTTTTAAAAATCTCTGCCATGTGCTTTTGCCTCTGGCTAATTCTATCTGCATAGACACCATAATAATC
TGTTAATCACACTTAACAAGCCTTTGCATTTGATATACCTCTTACAAACAACCAAACGAACATGCAGGCAAAACAAAAC
AGCAACAACAATAAACACTTCATAGTCTTTCTTTTGCTTGTTTCTCTAGGATGACTATTCTTAAGACCCACACCTGACA
AGAATAATTCTTTAATTTTTCATTTTCTTAGAATCAAGGTATTGTGTTTTCATGTAGAGTTGTAAATATGGTATAAGCA
AAGATACTTGCTCTCAAACCAGGATTTTATATATATTTCATATTTTGTGGTTCTATGTATGCATTTTTGGCTCTAAAT
ATTTGTTTTCATAATACCATTAATGTGTAGGACAATTACTATGTATTTTTGTTGTTGTTGTCCTATCCTTTTCCTTTCC
CTTCATCTTAGTATTAGGATAAGTATGCAACAGTAATTTTCCCTTTCTATGAGATAAAAACTTCTACATCTTCCTAAGA
TAATATTACTGAGATAGCCATTTATAGATCATTATTTAAAAAGACTTTTTCATAGTGCATTGACATACACTATCCCAAT
TGTTCCTCATATAGAAGAGTTTTAAGTTGAAGAGAAACATAATCAATGTCCTCTAGAAAGATTCCTCTTGTAGTAGCAT
AGAAGGGGAATAAAAATAAAGCAAGACAGAAGGTGGGGGAGTCCAGTTGAGACATTATGATAAAAATCCAGTATAGCA
GATAGAGTCATAACTTAGAGCAGTGGAATAAATAGGTTGATATTATTAGGCTAGGTTTGTCCATTCTTAGCAATCAATT
AGAAAAAGGCAGGTGGATAAAGAATAAAGAGATGGAAATCTTAAGGTATGTACTCAGCCAACTGGGTGAGTGATGGTAG
CACTTACCAGGTCAGGGGAGGAAAGCTGAAGAGTTTGCTAGTGAACACACAAATAGAAATGTTCAGTAGATTATTGTCA
TCATCATCATCACCATCACTATCATCATCATTATCATATTTCCTCAGCACTATCATTTATTAATTTGTGAGGCTTGGTA
CTCCTAGAAGCTTTGCACAGATCACAGTTCACTTAATCTTTTCAACAGACCGTGGAAAATATACCCTTTTCTCTAGATG
CAGACCTGGAAAATGGAACTTAGAAAAGTTATAGAATATATATGTTGTTGTTGTCCTTTTAAGCTCAGTGTACATGTGC
AGGATATGCAGGTTTGTTACATAGGCAAACATGTGTCATGGGGGCTTGTTGTAGCGATTATTTCATCACCCAGGTATTA
AGCCTAGCATCTATTAGTTATTTTTCTTGATCCTCTCCCTCCTCCCACCCTCCAGCCTCCAATAGGCCCCAGTGTGTGC
CATTCCCCTCTATGTGCCCATGTGTTCTCATCATTTAGCTCCCACCTCTAAGTGAGAACATGTGGTATCTGTTTTTCTG
TTTCTGTATTAATTTGCTAAGGATAATGGCCTCCAGCTCCATTCATGTCCCTGCATAAGACATGATCTTGTTCTTTTTT
TATGGCTAATGCTAGAATTTTTATGACTCCAAAGTTCAGGTTCTTTCAATATATCAGATTTTAGGAACTCAGAAGAATT
GAGAGAATAGTGTGGATTGGTTGGAAGTTACTAGGAAAATATGATGAGCATCAGAAAGAACACCTAAATAAGGGATGCC
AGTGGGGAAAAGCTCAAGGATGGAAGCCAGAGGTGCACCATTTAAAGTGCAAGGAGGAAAAGAGGAGTCAGTGATGGGA
CCTAAGGAGGAATTCTCACTCTGTGCTTTTTCAAGCAGGATACAGATTCCTTCTTTTTTTTTTTTTTTTTTTTTTTTGA
GACGGAGGTCTCACTTGGTCACGAGGCTGGAGTGCAGTGGCGCAATCTCGGCTCACTACAACCTCTGTCTCCTGGGTTC
AAGAGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGAGTGCCATCACGTCCAGCTAATTTTTGTTATT
TCTAGTAGAGATGGGATTTCACCATGTTGGCCAGGATGGTATCAATCTCTTGACCTCGTGATCCGCCCGCCTCGGCCTC
CCAAAGTGCTGGGATTACAGGCATGAGCCACCATGCCCAGCCACAGATTCCTTCTTGTGTTCATTTGAAATGTGAACTC
TGAACAAAGGACAGTTTATCTTGGATAGTCTTATTCCATGATTTATATATCACTAAAAGAGCAGAGAATCTGTAGATAT
TATAAGTGGGATCCTTAATAATTAATATATGGAAAGAGAAGCTTACCAGATACCAGGATTTTTCTGCATTGCCTGGAAA
AGGAGGATATCTGCAAACTTTTGTACCCTGTGCACTTATCAGATTGGACCTCAGATGGGACCTCTGCCCCACAGAATTT
CTCTTTAATGACTCATTGCTTACTGGTCTAAGAAGAAAAATAATTATAGCCTCAGGTTAGAAAAATTGAAATTGAATCA
TTTCACAGTCAGATTAATGCTCCATTAGTCCCATCTATATGAAAGGGAGGAGGGAGTCACCAAGTCAGGTTGGAAATTC
CTTGGGATGATTGAATGTAAGGGAGAAAAACTGTGATAATTGACATAGTCAAGGCAAGAACCCAGTTCCGAAGCAAATA
TTTTCTTTGTGTGAGGAAAGGGTACAGTATTGCTGGTTCTTTTTTACATATAATATTACTTTGTATTCTCCCAATACTT
TATTTTTTTTTAAAATGGATAAGAAATCATAACCAGTAGAGAGAGAGTAAAGAAACACAGGTCTATTTTCTTTAATGAATA
TCATCACTCTTGAGTTATAACTCTATTATCTACAGTCTTGTTAAGTGAAAATTGTTTCCTCAATAAGAACACTTTTTTA
TAGAAGTTGAAGTTCTCTTCTGGCACACATTAGAATTCTCCAGTATTCATATTTCAGTTTTATTCATGGTGTCAAAAGG
AATTGATGTGATAAAAATTTCCAATAATGCAATGAGAATATTCACGTTTGTGCAAATACCATGGAGATGTTGAGAAGTAG
AGTGAAGGGACATTATGTGAAAAGTAACATCTCACTGGACTCACCAACTCTAAATCTTACTTTTTTCTTCAGAGATGAG
GTCTCACTCTGTCACTCAGGCTGGGGTGCAGTGGCATGATTATGGCTCACTGCTACTTTGAATTCCAGGGCTCAAAGGA
TCCTACTGCCTCAGCCTCCTGCGTAGGGAGCCATCATACTCGGCCATTTTTTTAAAAAAAAATTTTTCTGTAGAGACAA
GGTATCACCATGTTACCCAGACTGATCTTGAACCCCTGGCTCAAGCAGTCCTCCCACCTCAGTCTCTCACAGTGCTGAG
ATTACAGGTGTGAGCCACCATGCCTAGCTTAAATCTTGCTTCTTATATATGCAATTATTAACAATAGAAAGCTGTTTTG

Fig. 9.157

TATTACTAGATTACTTGGTTTTTCAAAATTTCAACAACTCTTTTTGATTTTTAAGAATATTGGTTAGAATGGAAGTATT
GGCATAAGTCACTAGTTTTCAAAAACATACCCAGCAGAGTTGAAAGCGAATGTAAAACGCCATGGCCTGTTGATTCTAT
CATCGTATAGAGTATTTTTCTGCTTATGTACTTTTATTGTTTTGGTTTAGAGACATGTATGATTTATTACACCAGTATT
TTAAAGCACATTCTCCCTCTTCATTTCTGCAATGTACTGTGTCGAACCAACTTCATAGGTAAAAGTTGTAAAATATTGC
TAATTTCACATGGTTCAGCCTAATAGAATCTCATGCCCTTTTAAGCCTTGGAGAAGGAAAGCCTCTCATATTGTCTCCT
TCCAGATTCTTGGCTCAATCCAAGCTTCTGCATAGTTGGAGTGGCAAATCCCACTCCTGCATCTGGTGAGCTGTGCAGT
TAGCAGCTCTGACACTTTTCTACGCTGTTCAAACAATTACAGCCCCAAAATGTGAGTGTGGCCTTAAAAAAGGCTGATT
CCATGTGACTACCAGATTGCTTCAAGATCTGCCCAGTCATCCCCCTGACTGTGTCATCCCTTAAAAATCTGTGTCATCT
GGGTACAGAAAATTAGAAGAATGTTCTCTTGATCTCTGCTTAAATTTTCAGAATTTTTCCTTTGAAACCACGAACTAGA
GAATTGGAATTAGACTTAATGACTTGACTCTATGTAGTATATATTTCTTTTCTCCAAACACTGTTTTGTATACATGAGG
AGGGACAAGAAATGAAGGAAGGGGAAAAGTATAGCGTTTCAGCCCCAGAAAGGTACCTTTCACAATGTAAATGCAGAGT
ATCTGGTTAGACATAGCCATTTTGCTCACAAGCACATTCAGAGATGAAGACATGCAGTCTCTAATTGTTTCGTTGTATC
TAAGAGGGTGAAAATAGAGGTGGCATATGAAAAAAACCTTCCATTTTCATTGAGCGTACCCATATTCTATGGCATTTCT
TACCAGTCAGTAGGAATTTTTTTCCTACTGATCAGTACTACTGAATTACCCAAAGGCAAAAATATTCCCTATTGTTTC
TTTGTTTTCTAACTTTGTTCTCTAGCTTCTAGGTAGATGTTAACTTTTTGGTATTTAAATGTGCACACTCCCTGAGACC
AAACTGCCTCAGCAAGTTTTACTTCAATATTAATGGGCAAGATGAATATTGTTTGATGTTTCACTGTTAGCAAAAGGGA
GGAGAAAGAACTAGAACTAAGTTCAATTGAACCATTACTATGCAGGGTCTATACAGTCATGATTATTATCTCAGATTCC
AAATTCTGTTCACCAAAAAATTATGATTATCAAATTGTTAAGATAGTAAATTTTATGTGTATTTTTACCACAATAAAAAG
TTGGAAAAAAATGATTTGACTATATCCAAGTTTGCAGAGTTGGTAAGTAGCTTTTTATTGCAAAAAACTTGCTGATTTGT
GAAAGAACCTTCATTTCCAAATTAGGAATAATTTCCTGCAAGGAAAGACTATGCTGTGTGTGTGCCTGTGTGCTCTTGT
GTGTGTGTGTGTGTGTGTGTGTGTGTAACTCTTCTGTTGTGAATCCATCAGTGGTTTTGCATTGTTTACAGGATAATGC
TCAGAATCCATAACAAGGTCAGTAAACTCATCTATCATTTCCTAGGCATGTCTGTTATCTGATCTCTAGCCTTTCTTCT
CCCATCGTCGCCAAGTTTAGTTCTACTTGACTTCCTTCACTTCCTTCCCATTGACCTAGGGAGCACCTCTAAGACTGAA
AGGGAAGTCGTGGGCTTGGTGGAGTTGAGGTGGGGAATCTATGAACAGATAAATCAGATAGAAGCATTGTTTGGTAGAA
AGAAGAGCTCATGAGTGGCAGTAGAGATTGAGTTAAAGAGTGGGATGAAAAAGAATCAAAAGGAAGTAGTACGATTTGG
TGACCAATTTGTTAGAAGGGATGAGGGGCAGTAAGTAGTCAGTGATGACCCCGAGGTTTCTAGCTGGACCTAGAATTGT
CCAACTAGTCCAAAAATGAAAAAATTTGCCTTTAACTAAGATGAGTTTGACAAAAGATGAAGTAAATTTGAGGGTGTAG
GTAATGAAAACAAGTTGGCTTTTTCTCCCTTGATGGCAAATTTCAGTGTGTATGGATGTATACATTTGTGTATTTGTGT
GTTTGTCAATACCCATTGATTTTTCTTAGGTTATATTCAAATACTGAAGTTGTACTAATTAAGCAACCGAAGTGTATGC
TTTCAGCATGGTACCTTTCACACAGCACCAAACATCATTATATTATTTTCTATTGTAGCATAACAAATCACAACAAAAT
TAGCATCTTAAAACAATACACATTTGTTACTTTACAGTTTCCATGGGTCAGGAGACTGCACTTGACTTAGCTGGGTTTT
CTGTTCAGGGTCTCAAAAGGCTTTAAGAAAGGTGTTGGCCAGGATTGGGGTCTCATTTGAGGTTCTGGCTCCTTTTTCC
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AGAAAGAAACTCTGACTTCTGACTTCTAGGCCATTTTTTGGAGAGCTAATCACTTGCTTAGACCAGACCAACCCTGAAT
AACCTTTGATTAACTTAAAGTCAACTGATTAAGGATGCTAATTACATTTGAACAATCCTTTAACTTTGCCATATTCCAC
TGGTTAAAAGAAAATTACAGATGTTGACCATCTGGGAGGAGATAGTGTAAGGGCCTGAGCTATTGGAGATCATCTTAGA
ATTCTGCCCACCACAATCGTGTTCTATGTTTATGCAGGTATATGTGTGAGTGTGTATTTATGTGTGTAGTTAATAACTT
AAAAAATGAATTACATGTATCCCAAAACAAGCGGCAACTGCACATCCCATGCCTTCTTACTTGGATTAGTTTTCCTGA
AGTTACTCCAGGGTCCTGTCTTCCCATTGTTAGGTTTCCTTTCTGCTGTCCTGGCTTCACCTTTCGTAGCCAAGAAAGC
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TGTGATCCCAAATGAGCTTCAGCAGTTTGGAGTGAGGCCATGGCCCACATGTTTGATGCCACCAGCCTGATTTTTGTAA
TGAAAACTATATCAATAAGGTAAGTAGTCCCTTCTTAGGCATGCATTCTTTTCCAATTTTATGTAGTGGTCAGTCATTC
TTACAGTGATACAAATAAATATTTATGCTTTCATGTCTTTTAAGCTTTTAGCAACGTTAAAAGAAAAGGAGTCTGTAAT
GAATGAAATTGTCCCATTGAACTTATTTTTTCAGCTTTTGAGGATATATCGAGTGTACTTCTTAAAACTGAACATGTGC
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ATTTGGTATGAGCAAAATATATTGTTGGAATGAAGCAAAGGAAAGAAAGCATAAGAGCCATCATAGTTAATTCTGTTTA
ACTTGTTTTAACTCTATCAAGGTTGGGCCAATGTGGCAATTTATTAAATAATTTGCTCTCATTAATGCAAAAGAAGAAA
TGTTCCTTAGGGAAAAACATGTTGTCTTGGGTACAAAATTCCAGCAATGTTTTTTACCACATGAGACTTTATGGAAAAT
TCCAGATAACAGACCTTGCCCTAATGGTATGTGGGCAACAAATCCAGAAGTATCTATCATAGCATTCTTTCTTATAACA
AATTTTATTAGAAGCCAAGGCTAGAATGTTGAAGCTGGACTCCGGGCAGGTGATTCAAATGCCATACTATTACTTTCCT
AGCATGGACAGTTCTGGTTATTAACTCACTCTTACATAAAACTTTTAGAACCAAAGGATTGGAGGGATGCTGACATTCC
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AAAACTCACTTTGAGGACCTGAAATGTTATATTCCACTTTGCTGATTGAGGTCAAGGACTATTGTTTGAACCTCAAACA
AGCAGGTGGTGAGGTTCACTTTCAACTGGTAATTACGAGAAAACGAACCATTATGCTAGATGCAAGGCCACCTCATCTT
GCATCCGGTAAACATGCCAACAAAAACACAAACAAGTGTCTGTAATACCTTTCAACAGCTCCCTGTTGCTCTCATTATA
AATATGGAAATCCTTACCATGGCATTCAGGAATCTGCATGATCTGATGCATGTGTATATTGACAGCACATCTTGTATCA
TTCGTGACATCACTCTCTATTATTTGGCTGATTTTGACCTAATTCAGCACTTGGAAACCACCATACTCACTCCTGCCTT
GGAGTTTTTATGCATACTGTTTCCTCTACACTGAATAATACCTCCAAACCCTACCGTCACTGCCTATTAACCCCCTACT
TCTCCTGTTTCTCAGTTCAAATCTCCCTTTTTCTGATTATGTGTCTCTGATTCTCCAAATCTTGCCAGTTGGCCCTGTT
AGGGACTCTCAGAGCTTACTGTAGTTTTATTTCATCCATAGCAGCTTATGAGATTTTTTTCATTAATGTCTATTAGCCA
GATCGTCAGCTCCATGAAGGCAGGTTGCAGGCTTGTTTTTCTGACCACTCTATCATCAACCCAGAGCACAATAAATGAA

Fig. 9.158

CATAAAGTGAATTCAATAAAAATGTGCTGAAAGGATAAACTACTGTTATTTACTACATTAATTACAACTTTTGTTAGCC
CCTTACAAAAGATGCTTTCTTAGATGCTGCATTTCCCATTCTACAGAGGTTGAATAATATGACTATGATAGTTTTAGAG
GAGATGGGAAATAGTTTGGTATTTCTTAAATTAAAATATGAATCTGTTAGAGCTAGAATTTTATTTTCTGAAAGATAAT
CTTGTTTAGCCAGTGTGAGAAACTACATTACACAAAGAACATTTTGCTAGTATTATTTCGCAGGAGAACTAAACTTGGT
AAACTGTCGTTCCTAGAAGATTGTTTTTATCAGGCACCGTTGCCTTCTTTGAGCTTTATGAACTCATGTTTTAGGACAG
TTAGACATTACTGATGGAGTTAGAGAATACTAGAAAGTGAACTTCAGCTAAAGAAAGTGATCTTTTTTCTCTAATGGCA
ATTCAGTTGCAAAGTTCTATTTTTATTCTAAGGGGCTCATAGAGGGTGGTCCCCAGGATTCTCTTAGGGGTCTGTGAGA
CCATACATATTTTCATAATAACACCAACATGTCATTTGTAATTTTCACTGTACATTTTCTCAGCAGAGTTCTCCAGAAG
CTATACAATGTGATGCATATTATTTCATAACAGATTGAATACGGAAGCAGACATGAGAACCTAGATGTCTTCCATTAGG
TGGCACAAATAAAAAACATTGTCACTCTTCTCACAGTTTTTGGAAAATAGTTATTTTTACCGAAAATAAATTTATTAT
ATTTTTTGAAAATGAATTAGTAAATAAATATTTATAATTGTCTCAGTTTTAAGATGGCAAATATTCCACATAAACAAGA
AATCTGTGAGTCTTCAATAATTTTTAAGACTATAAAGAGATTCTGATACCCAGATATTTGAGAATCACTTCTCCGAGCC
ATTTTATTGACACAATTTTACTTGACTTTGCAACCTGACCGTTTTAGATACCTTTTCTTTCCAGTCTTTTCTAAAAGAT
CAATTGATTAATTGGGTTGACTCGATGATACAAGCACACGATCTTCAGTATCAAAAGATACTCATGACCAGTAAACCCC
TCTTTAGTTCTCAATTATCCAATTCCCTTTCCTGGAGGCAACTGCTACTCTTGTATTTCCTAATGGAGATCTTTTATGT
GTTTACTCAAATGCTAAGACATAATATATCATATTCTGCTTCCTGCTTATCTTCCCTAATGATATAGCAAGGAGATTGA
TTCCTAACTCTGCATGCAAATCTGCCATAGTGCTTTTAGCAATTGCAGTATCGTCCATGATCTGGATGAGACATAATTT
CACCAGACTCCTGTTGGAGTCTGTTGGATTGTTTCCCATCCTTTGTCACTACCTACAGTGTAGTGATGACTATTCTTTT
ACTTATTTGTTCATGTAAAGTAAATATATCTCTAGAATTAATATTTGGAGGTGGAATTCCCAAGTCAAAGGAAGGAAAT
ACATATTTTTTAAAAGGATTTTAGTAGATTGTTCTGAAAAAAATTACACCAAACTTACCCTCACATGACTATTTTTGCT
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TTCATTGAAGCTCATTAGTTTCCAAAAATGTGTCCTCATTTCATACAAAGTATCTTTGAACCATTGCCAGGTCATAGAA
GTGACTCTTGAAGATCTTCTTCTCTGGGATCAAGGGTCACATCTCGTTCTCCTGGCTTCATACCCTTCTCTCTCTACAC
ATCTCAATTAAGTAAGCTTCCTTTCTTATCCTCTGAAATTATAATCATCTTTAGGCTCCCAGATATAGGTGACCTGTGC
CATCTAGTCTGACTTCCAGTTTGCAAATTATCTTCAAAAAGTGGAAACAGCTTTTACTTTCTACTTTATAAATTCATAC
GTGCTCAGGAGGACTTTTATTAAGATTGGGACATATTGCTTAGTTAGTCTCTAGGGTGGAATCATAATTAATGAAAGAA
CTCTGTCTGATGGAAGGCTTAGTCTAACAAATCATCCTAAAACTTCATTAGACATTGTGTAATCCCCATGGACACTGTT
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GACAGACTTTCTACAGGAAGGAATGGCTGTTTCTATTTCAGAATATTACTGATACCAGAGCTTTGCTGCATCTTCATGT
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CATAGTTCACTGTCACCTCAAACTCCTGGGCTCAAGTGATCCTCCTGCCCCGGCCTTCCGGAGTGCTAGGATTACAGGA
GTGAGCCACCACACCCAGTCTTCATGTACTTTCTTATGTAAATTTATTTTGTTTGAGATTTTCTTTGTGATGGAATAAG
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GAAACACCATTATTTCTTTTACTAGAATGTGATCTTCTGGTTTTAATATTTATGTCTCTGTGCCAAGGTGAAAATATTG
TAGAAATGAAAGTATAATGAGAGAGAATCCAGATAATAAGATTTTCAATAAACAAAAAAAGAAGTATGTATAGGAGTCC
TGTCTGCTGCAAATTTTAAGAATGGTTTTCTGTCAACATACAGTTGTCATTGCTTACTGAAAACTTCTATAAAAAACAA
GACACAAATGATTGAGAAGATAGTAGAGACTGAAACTAGAACTGTTGATTTAATAAGCTTTCTTACTCATATACTTAAT
CCACAGTAAATTATTAGCAAATTACATTTTCATAGTATTTCAGAATTAAAAGATCATAGTCAGGGCTTAAAGGAATCCA
GTTGTTTTAACAGTGCTGGAGGCAAAGCGTTCTAGCAGCAATCACCTGTCAGAATGACTTAGGTTGGATTGTTTGCACC
ACACACTTTACTATAGTTACATGTCTTTCATGTCCCTTTGTATCTCTGACTCAGTTTCCTCATCAGTGGTAATAGCAGA
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TCATCATTATTACTATAGTAAATGACCACTATCTGAAATGGGATATAAAAAGGAAAGTGAAATTACTAAATAAATATGA
GCGTACAAAGACCTGACAATTTAGATACAATATACTCACTCTGTCTCAAAATAGTGTCTTCTGAAGCTTTAGTCAGAAT
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CAGTTTTAGCTCAACTGGGATTTAATCCTGAAAATCTAAATTACATTTACAGACTTTAAGTTATTGTGAATATTTACAC
TACATGGGAGAATTACCAAAATATATTCGTTACTCATACAGTTTTCGAAAAACAGGTGAGACATCTTCCAGTTAAATTC
ATCTTCCTTTTATGTTTAATCTATTGAAGAATTCTAAACATTGTTTTGCACCAAATTGCTCCCTTAAGTTTTAAGAGCC
ACCTAGTTTGGGCATCAGATGTTCTCCTTTATTTCTGTAAAAATCTTGCAAATTCACTCCCAGAAAGAAATGTAGAGAA
TACTAGGCTATTTCACAGAAAAGGCTTGCTGCCCTTTCCTGATAACAAGGTAGTTATTATTCTTGGCTGAGCCTGTCCC
AGAAAGAGTCTTAGGTGACCTGGTGTGGGAATTGCTAAATCTCAGGCTACTCACTGAGACTGTCTGCTGCTGTGCTGGG
CACTGCAGTCCTCCAGAGCAGGCCTGTCAGCATCCTACCGTGCTCTGAGTAGGTCCACTGGGGAACCTGGTGGAGTGAC
ATCATGTATCAGCCTCTAGCAGCAACTCCTCTCTGTAGCCCCATGTCTTTCCTGTGGTACAAAGGAACAAGTGCTACAG
GGCATGTCTGTAATCGTTATCCCAAGGGCACGCTCCACAGGCATCTAAGGGTGAAAGGTACTGCCAGTCTGTTGGGTTT
GTTATTTCCATAGAGCTACACAGGAAATAACACCACCAAAAATAACACATTCAAACTCAGAGGGCAATCTTCCCTAACT
ATTCATAGGCACACGTCAGGCATTCTATACATATACCCAGCTCTTTGCTAAGCATAGTGAAATGCCCTTTTACATTGCA
ATTAATTATTAGCCAACATTGAATAATTATTGGTGAGAGGGTAAAGGGCAAGTGAAATAAAAATAGAGCTGGTTTATTT
TTAGGAAGACACTATTTTAATGTGTTGATTAATCAGACAGGTGTTTAAAAGCATTTGTTAGAGTCAATTCACAGAAAAT
CTCTTTTACATGCAGGTTACAGCCAAAGAAAGAAATAATAGCCAACACATTTACGATTTCAATTGCAAAAATTGTCATA
TTTTTGAACTTGTGTGGGTATTTGAAAATATTAGCTCCTACTAGGTCCAGTTAAAGCTTTTAATTCTATAAGGTTTCAG

Fig. 9.159

ACTACCAGCTGACCACTGCTCAGCATCCCCTGGACTCCAAGGGTTTCATCTAAGACATCTAAGGAGAATGTCTACCCGC
ACATCGCACTAATGCCCATGACTGCACTGCTTGAACCATGAGGTTATTGAACAGAAAGCAAATCCTTTTCTGAAGAGCC
TCCAAGATGTGGATATTTCAGTTAATTTCAGCTCCCTGCCAGCTCAGAAGAATGATGCTGTGCTGTGTGCTGTTCCCAT
GAATACTACACGCAGGGCACTGCTCAGTGACTCAGCCTTCCAGGGAGCCAGTCAGGGTTTTGAAGCTGCATCGTCCCTT
TCATCCTTGAAGTTCTTTTGGATTTCATCAATGGCATGGAGGGATATTTTTAAAACAATGGAGATTTTTCAGGACTGGC
AAAAGGGCTCCCCTCGTCACAGTGCCAAAACCATCACAAACATAAGTTATGTTAAAAAAAATCCTAAACTAAAAATATC
TGGTACTTAGGGAACTAAAAGACATCTCATGTTTGCTATCATTTCCATCAGAGCTCAGGTCAATGGACAGAGATCAATA
CCAAAACAAACATGCATACTTAGAGCATAAATTCAGATAAATGCTGGAGAATTAACATGTAGATAGAAGTACCATCATG
CCTAAAACAAAAACTCAGTCCAATGGTTGTTTCAGTGAACTGACTAGCCTTCATAGAGAAAAGTTTATTCTTTTCAAAC
TGAAGTTAAAAGATATTCGGTGCTTCATTCGAAATTTTCTATTTCATGATTTTTGAAGTAGTGATTTAGAACTCTTTAG
GACTATAGAAAATCATTTTTCTTCTAAAATGTTGTCTTAGTCCTAAATTAGAAAAAAAAAATAGTAAGAAATTAACAAAA
CAAAAAGTTAATAGTATTATTCACATATATAAATAATGGGCCATCATGGTATCTGATTTTGATAAAAGGAAAATATACT
CTGGGATTATTTTTCCAAATTCTGGCACTCTATTTATGAGTACCTAGACAGACACTAGAGTCTCATGGAATTTAGTATT
AGAAATGCTACTTTGGAGTACATTTGATGTCATTCAAGTTAAAAAATTAAGGAAGTAGATTTTCAAAATAGGTAGCATA
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CCCTTAAGAACACGATAAGAGTTTACCTTCTTCCTCCCTAGAAAATATACTGCTTTTTCTTTTATAATTAAAACAATAA
TATGAAAGTTAATCTTAGTCCAGAAGTCCTAATAGCCCAAGAATAGAAATGTCAAATTCATCTCATATCATTAGTTTGT
AATTTTCCGTTGCCCTTTTAATTCCAATAACACAGAAGCTGTAAAACTGCTTGTCATCTGACTTTTTATTTGTCATTAC
CCAATTGAGCTTCTTATATTACAGATAAGGAAATTGAGGCACAGAGATATTAAGAAACTTTTCCGCAGGAAAAAAAATC
TGCTAGTTATTGAGCTGGGATTCAAATTCAGGTAGCTGATTCTAGTGTGCATGTGCTAACCACAGCACATACTGTGGCT
AACCATGCCTACACTCATGCTCAAAACTACGCTGTGATAGGTCTTATTAGCATCCCCATTTTACAGACGTGGAGATTGA
GGTGTAGAGTGGTTAAGTGACCTGGCAAAGGTGGCAAAACTAGCATCACAGTCAGCCAGTCTGGTTCCAGAGGTAGGAA
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CTTAGAGGTCAGGGTAAGCTGAGGATACGCATGACAAATGGGATTAGATATGACTTTTTCCTTCTTTCTTTCTTAGTTT
TCTAATTATTTTGTTTTAAGCAAGCATTATTTTGGAATAAAAATTATAAATATTATTTTTAAAAAGCAAACAGGTTGAT
AACTTAAAATGTGTTAGCTGGTGAAACGTCCAGCCTTATGGAGTAGGCCCCTGAGGTATAGAAATGGTTTTGATGGCAT
AGGATGTAGCCTTGGGAATGTCCTGGAAGAGTAGGAGCGGCCAGTTAGGCATTAACACTCAGGAGTAAGGAGACTGCAT
TTGGGATGCTCAGCTGATTGGAGGGTGGTGTTGAGTGGTCCCCTGGGCAGTGAGAAGAGAGGCCAATAGCACTGGCACA
GGAGGACAAGCAAGTTGTTCTAAGTAAACTCTCAAATGAACTGAGAGATAAAAACTCTAAATTTGGACTGCTTCACAAT
TTGCCTAAGGCTGGCCCTACTCAGGCCTTTGCCAGCTGTTGTTTTCTTTTAAGCCTCTGATCTGCAGGAAAACAGTCCT
GATTTCACAAAGCTTTAACAGAATTTTTATAAACGCAGATTTGGGGCTCCATATCCACAAAGTTTTCCATCCTTTATTT
TGAGAATCTGCATATTTAACAATGATCCTCCCCAAGGAACTGCAATGCAAATGTCCAAATACAGTCCTTGGTAATATGT
GTTTTCACAGGGTGAAGTTTTTGTCCAACACTGTGAGATGAGAGCTGGGGGAAAAAAAATGAACATTAACCATAGAACA
GGAATGCAAATTTTCTGAAAAGTAGAGCGCTACTCCTCTCCTCTCTTTTTCTCCATATAATTGAAGAGACACTCAAATT
GATTGTTTTCCCATTGTTTCGAATGGTTGCTCCATGTAATTACTGAACTGAACTGGTAGTTTGGGGGGAATAGGGGAAA
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CAATTCGCTTGGAAACTCCTCCAGCTGAGGCTTTGTTAGGCTTTGCTGAAAATAAATTAGGTGACTCATTAAATTGTTG
CTGGAGTTAAAAAAAATTAGGCTTATTGATTCTTAAATTTCTGCTAAAAATGTTGCTAAATTAAATATAGGTTATTGTC
TTTATCAAAACAAATAACCCACAGCTTCTGTATTGCTTTATCTGTATTCAAAAGTTTGGGCCGGGCGCAGTGGCTCATG
CCTGTAATCCCAGCACTTTGGGAGGCTGAGGCGGGTGGATCACCAGAGGTCAGGAGTTCGAAACCAGCCTGGCCAACAT
GGCGAAACTCCATCTCTAGTAAAAATACAAAAAAAAAAAAAAAAATTATCTAGGTGTGGTGTTCGGGTGCCTGTAATCC
CAGCCACTTGGGAGGCTGAGTCAGGAGAATCGCTTGAACCCGGGAGGCAGAGGTTGCAGTGAGCCAAGGTCGTACCATT
GCACTCCAGCCTGGGCAACAGAGCGAGACTCCATCTAAAAAAATAAAAAATAAAAATAATTAAAAAAAAAAAGTTCGAA
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AGAATACTGTAGTTTGGATTCTTTGGAGGACCTTCGGTTTATATTTTATTTGCAATTATGTTTATGCTTATTATTTCTG
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GGATTTAAACCTATTTTCATCTTGCAAGTATATATTTTAAAAGTGATTCATTTAAATATTCTGCTCAGCAATTAGCACA
AATGTTGTCACTAAATTATTACAATAGTAGCTATTAACTTCAATAAGTAAAATAACAGTTCCCTATTGTATAATATATT
TAGAAAAAAATCACTTAGTGGGGTGCATGTATGTGGAACAAGGTGAAGACTACCTATCTCATCACAGAATTCCTCAATT
AAGAAGAAAGTGCTCTTAATTACATCCAATGGCATCATTTTCATGAAGATAATCAATAACAAGTGACTTATTTCAGTGT
CTCAAATTTTCAAGTTTATGCATCCATCTACTTCACAGCATCCATCTCCATGGGCCCCAGGCTGATTCTTGTTATCCTT
GCTCAACCTATCCATTCTCACAGTAAAAAGCCATGAGAGCCATTATTTTTTAGGAAATGTGACCCATTATCCCCAAATC
ACTGGGAAAATCACCTTACTCGACGGGTCCTTATAGCTATCCCTAATATCTTGTTGATTTCTCCTTTAACCTTTTTACT
ATGCCAATGAAAATGGAGCAATGTATAACTCAATAAACTCCAATTCAACTGTCAAATATCCCTTTCTTCCCAAATTCTG
TTTAAGAGTCTGTGGGCCTCTTCCAACTACAATCCCTGCACACCCATCCTTAGCATTAGCCATTGTACTTTTAGAGGAC
CAATTTGTAAACTTGATCATATCAATCTTGAAATCTAGGAACAAAGAACCAAACTGATAAGCTCTTATATCCACACTCA
GGAGCTCATCTTCCCTGATTACCTTGGGCTCCAAGTACCACTTTCATGAGTGCCTCACTTGTGTAGAATCTCACCATGG
TACAGCTCATCACACCATTTTATTATCCAGCAGTGGAAATGTAAATTCATATCCTTTTAACACTCACAAAAGGAGTCAA
TTTCAGTCAATTTTTAGGAAATTTGGTGAAAGTTTAGTTGGTTATTATCCTGTTCTTCAAAAAGCACATCATTAGACAT
ACTTTTAAAAAAACCAGAGAATAATCTTACCTTATAAAGACAAATGACACATGTTGCTATGAGTTTAGGGGAGGGTTACT
AACCTTATTATCATGTGAACTGTTTGGAATTACCTTTGAACCCTCTATACATGGATTTCTGTCGGAGGCCTAAGAACTC

Fig. 9.160

CTTGTCAGGAGAAGGAAATGGTAGAAATCAGATGAATGGTGAAGTATGACCATTAGAAACCACCCTCTATACACCTACA
CTGCCTATTTTTACATCAAACATAGCGAACTGTCCTTTAGGAAGCAGAAAAGGCAGAGCTGAGGAAATGAGAGGCACCT
CTCATGTCTTTAAGAAAACAACTAAGTGGCAATTTCTGGAAAATAGGTTATTGTTTGTCAGGTATTAGCCTGAAATTTT
GCTTGAATTGTTTCTCCCTAGGAAATGAAAGATGTTCACTTCTTAGTTGTTTTGGAAAAACAAATACTTACTAAAGATT
ATAATGGCTATCAATTTAAACAAACAGATGCTTTTAGTGTCTTTGTGAATAACACTAGTGAATTTGCAAGAATTATTGC
TTTACCAACAAAGCATAAATTCCCATGTTGCTTCAGTACTTGTGCAGTGTTTGTTCTGGAGCCTCTATTCAATATCAAC
CAGCGTATAGTAGTTCCTCCGTGAGAGTCTCTTGTAAAAACTTACATTCATTCTTGTTATTATTTTATCTGAGTGAATA
TTTGACAAAGACCAAAGAAATCCCCTTGAGACTGGTACCCATTTTCTCTAATTTGAAAGATATTGACTAATTTTGTTAG
ATCCCACCATGAAGGCAAAAGGAAAATATATTAGCTATCACTGTGGCTTAAAACAAGAAATTATTTATTATTTTTAACA
AATCTGAGGGGCAACTGGTGTTTGGTTGATCTATGTTGAACTTATGGATAGTTATGTGAGTGTCAGATAGAATCAGACA
TCTATGTGAGCTGGCGCATCTCCATTCCACATTCTCTCTCATCTTTCTTCTGGGACTGATGAGCTTGCCTGGGTGTGTT
CTTCTCGTGGAGATGGAAGAGGTGGAAGAAAACAAGCCCAACACAAAAGCACATTTTCAAGTCTCTGTCATGACAGTTA
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CTTCAGCTGCTGCCCAAGTGTCTAAGAACACTCATTCACCTCTCAGATACTCACATACCTATGAAATGCACCAATTTCA
TATCATGAGCCAAAGTAAAACTCAGAATCATTGAAATATTTGTCTTTGCATAGAAAGAGTCCCATATGGAAACAACCCA
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CCTTCATCTCTCCTTCCTTCCTTCCATTCTCCCTACTTCCTGACTGCCTATGTGCTTTCCTCCCTCCCCCCTTCCCTCC
CCCCTTCCTTCTTTCCTTCCTTCCTTCCTTCCCACCTTCCTTCCTTCTGCTCTCCCTCCTTTCCTCCATTTCTCCCTCT
CTCCCTTATATTTCTTCAATTCTTATCATTTGAGTATCTAGTTAATGAGTTCTCATTTGATGTTATAGATTTTTTTAGC
TCTTCCTCACCTGTATTCCTTGGAGTAAATTTTATGAATCTTAGAAACAGAGTCTGGCTGATAAATTTATTGGTGCATC
AAACTCATTGAGAAATGTCTTCCAGTTTCATCTTCCAAAATGTTACTAGTTCTAAAGGTAGTGGTTGATAGTTCACACA
AAAAAATCAATACTGATTCAGAAATAACTTGCTCATCAGGGAAATAAACCTGGAAGGTTTTAGTCATAATTTATTTATA
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TAAGAGTCTTTGATGTATTCTGGGAGCTAGCATCTTGAAAAGAGGAATAAAAAATGACTTATCTGGAGTTAGGAAGGTG
CTAGTCCATCACCCATAAACCAGTTAAAGAGATAAAGGTGATTTATCAGAAAGTACAACAAAAGTGATAACAATAGAAT
ATTATTCTCCATACCAAGCAAGTTACAGGTATCCCCTGCTCTGGACAAATGCGTGATGTGTAAACCCAGATTGACCAAG
GGCATAAGGGAGATGTAGATCTGTAGCTTTAGCACACATGACCAAGGTGGTGCACTTGGTGTAGGCTCTCGGCTGATTG
CTGACTTTGCACACTTGCGGGGCATTTCATGAATCTAAATTCGGGAATAAGATTTAGAAGCTGGCAGATGACGAAGAGA
TTGTTTGGGCAACCAGGACTCTTGTATGTGACATAATCAATGCTGAAGTTAGTTCATCATCCCATTCCTTGTATTTCCA
AATCTGTGATGCTTAGGGCCTTATCTAGTGCCTTTTACCAAGTGGGTGGGTTGTAGAAAAAAAAGGACTAATACTCATT
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ATGCAATTTCAGTACTTGGAAATGAGCATTTTAAGACTCCTTGTTGACTTCCCTTGTATTTTAATGCATTTCTAGAGAG
ATGTCTGCTTCTGCATTGCTTCCCCATGATTTACTTCAGTTGAAAGTTCAGCCAGATCCATTATTTTCTTTCTTTGACA
CATTATGCAAATTAAATGCAAAATTCAGTGATGAGAGGAAGAGGTCTCAGAGCATTGAGCAGATGCCGTGTCGGTAATA
GAGTAAGGCAATTACAAAATTACTTGCAGCCACTGTGACTGTGTATTTTCCCGTATTCTGAAAAGAAATCTGTCATGTG
CTCATCACTACGAGATTTATTTTTCCATTGATGTGTGGGAGATTTATGCATTTAACTGTCGTACACATTGATGAGAGAA
ACATGCACCTACAGAAATAATTTTTTATAGATTAGTGAGATATTTAATTCTGACTTTCTTTTCCACTAAAATGATCCTT
TGTAATAGTCTTCTCTTCGCCTGTATTGTAAGTATGAACATCAGAATGGCTCAGTAAGCTGGAAGAGCAAAACCATGTC
TGTGTGTAGAATTCCAATGCCAAAAGAGAAATACCACTTATCTTCCACTTCTATAAATAAAGGCAATAGCAAAGTCATT
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GGGTAATTCTCTTTAGATTCTCTAGTCCTAAGCTGTAATATGTCTTATAGTTGTCATATTTAGTGAACAAACCAGAAA
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AAATGCTCTTTCTTTTCAGGCTTGCCTTCAAAAAAAGTTAGTCTCATACTGAATGGCAATAATTTCTTCTTCCTGCCTC
CTAAGAATACATTGAGGATATAAAATTATGAGACTAGAATGCTCTTATTTCAAAAACATTCACAGTAGGCATTGGCCTG
AGCAATAATTGTGAATGTTTCATATTTAGAGAATGGGTAGATTATTAAATATGAACTATGAAAATTTCTACCCTTCTGG
TTTTTCTGTGGGATATAATCCTCTGGTCTTAAAAATTAATTTTAGTAATGGATTTTCACAAGTTCCCTTGGAGAGCATG
CTTGGAACATTTTTGTGACATACACTCTTGAGGTTTTCCTTCTAAATTTCTTTTCATCACTCATTTTGACTTTCAGATT
TCTTAAATATTTGTTATTACGTGTATCTTTGTAAATAAAAGTGAGGCTTAAGAAGTTTGACTTTGTTTTAGGATGGAAC
CTTGTTAAAAGTACAAGCACACATGTGTTGACAGCAGCTAGAGGAAGCGTGATAGTGTGGAAAGAAACAGAAGTCCAAA
GACCTAGGGGTACATCAAGTTCCATTATTTAATTGTCATCTTTGTCTTTGCTACTGAAAGTATGGTCCACAGACCATTT
GCATCAGCATTGCCAGGGAGCTGGTTAGAAGGGAGAATCTCAGGCCCCTTCTAGACTTACTGGATCAGAGCCCGCATTT
TGGCAACATTACCAGGAACTCATATACACACTCAAATTTGCCAGGCTCTGAACTCTATAATCTCCAGCATTCTGATTTC
TCCAAGTCCCTCCTTTCTCATCTTTGAAACAGAGTAATTTCTACCTCACAAGTCTAGTCGAGAATTAAATACAAACATG
TAAAGCTGCTGTGTTCGGTGCCTGGCATACATGGCTGTCCCCCATTCCTGCCAACACACACCTTCAAGCAAGACAACTT
GAGAGAGGCTGAGTGGGAGAGAGGGTGAATAAATGTTAATAACTCACATTAGAGTTGGCATTTTTTTTCTTTTTACTTG
TCTCTATTATATAGGGTGACTGTATTAATTGTGCAATACCTTTGCTTTTAAATAATACTACTGGATAAAAGTGAGATT
CTAATCTCACATATTATTTCAAGATAAGATTCAGATACAGAGTTTTAAAGAACCACCTATAAAAATCAAATCCACATAA

Fig. 9.161

ATTCAGAGGAAAATATCCTCAATGCTTATATAATATTGGATGTTTAGGGTGATACCCTCTAAGCACAACTTCAAAGGAA
GAAATCATTAGGGAAAATACTGACATATTTGAGTACATATATGTTTTAAAATTTAATTTACTTGAAAAGGAATGAAGAT
AATTAAAAAGGAAGTCACAAATTGAAAAAAATTATATGCATAGACAAAGAGTTGATAAATTTAACATAGAAACAGGTTT
TACAAGACAATAAAAGGATAAATGTAATGATTTTCAATAGATATAAGACATTAATAGGTGGCATGTAAAAAATGTCAA
GATAACATGAAAAAATTAGTTTTACTACTCATAAAAGACATGCAAGTGAAAACAACCAAGATGCCATCTCCAGTCTATC
AGATTTCTCTAAAAATGAGAAAGCGCTCATAACCAGTGAAGGAGAAAAGGATCTGCTTTCATCTTGGTTAAGATATACA
TTGCAACAATATTTATGGGAAATTCTTTGGCTATATCTATCACTATGAATTTATGCATACATTTTTCACCCAATAATTA
TACTTTTGAGAAGTTATCCTAAGGAATTAATCTAAAACTGAAATGATACATGTTCAAAATTTTCATTAAAGAAAACCAC
CAAACTGTACCATAATGGGAACTATTCATAAATATGTAAATTATGTCCATATGATAGAATACTAGGCACCCATTAAATC
ATGTTGTAAACAATATTTTTATTGAATTTTTTAATTGAAACCAAAAAAGAGCAAGATAAACTCAGTATACATAGCATGT
CATTTTTGCAAATGTGTATGCAAATGTGTAACATGTATATTTTTAAGATTGGAAGCTGGTACACTAAAAGTGAATGTTA
ATTCTGGGTTATGTTTTTCCCAAATTTTTGCCTGTTTCTGCCCTGCCTCTTTGATTTTAACATTGAGCATACATTTATA
GTTTAAAGACTGTTAAAAGTGGCACTTAGATATAGCTTAAAAATAATTTTAATAGCACAGGGAAATTATTTTATTAATG
CTAGTTAAATTAGACGAAAATATAAAATTTTAATGGCAGAAATATTTCAATTTATAACATATGCATAGGAAACTGAAAA
GAGTAGTTAGCTCTAAATATGGGGATTATGGATAAATTTTATATTCTTCACTTTTTTATTTCAAAATTTTTATAATTAG
CTTTAGGATTTTTATAACCAGAACAAATTACATTTAAGACTCCCTTCTAAACTTATTTGCTTATTTTCAATCTCAAATT
GTGAATTTGTATGGCCTCTATATTTCCAATCTAATTTTACAGACATTAAATTTCTCTTGAAATTCAGTGAAAAATTAGC
AGAGTCGAAGTTACACTTCTGTATGGCATTTAAATTCCTCCTCCCAGAATACAGCCACTGTTCTACAGTACAGAGGAGT
CCTTCATATCACGATTTTCATTGTGTCTAAGAGGCATGTGTTTCCACTTTGTCATTATTTGGTCTAAAAGGATTTTTCT
TCTATTTTGCTGCTGTTTTTGTACAAGACATATAAAGAAAGGTGTTAAGGGAGTGTTAAATATAATCAAGGTGTTAAGG
AGAAGAGCCCAGAGAGAGAGAACTCTTAATCTTTTCATCTGGTCCAGTTGTCAAAGTCTTTTGTCTTTAGCCATCACTTTT
TTAATCAGAGACATATAATCTATTAACTATGGGAACAAGAACCACAGATTTAGCCTGTGCTTATCTGGAAACCTCCCCT
AAAATACTACTGAACGACTCTTTTTTTTTTATTCCTGTCTCTTTTTCTGTTGCAAACTGATTGTCCACTATAACCTGG
AGAGGGGACTCAATTTTTAGAAACTGTCTTATACACCTCTTAATTAGTTACCTATTGCTGCATATACCCAAAATTTAGC
AGCTTAAAACAATAATGAAATTTTATTATGCCCACAGTTTCTTTAGGTCTGTAGTAATTTAAGAGAAACTTAGCTGGGT
GATTATAGCTGACTCTCTCATGATATTACAGTCATATACATCAGGACTGCATTCTTCTGAATACTTGACTAGAGCTGGA
AGATTCACTTCCAAGATGGCTCCCTCACATGGCTGGCACATTAGTGCCTGCTGTTGGGGGGAGACTTCAATTCTTTGTT
GGGTGGTCTTCTCCATGGGGCAGCTTAAGGATCTTCATGGTTTGTGGGCTGTTTCACAAAGTGTGCGTGATCCATAGGA
GATTAAGGTGGAAGCTGCAATGTCTTTTATGATAGAGCCTCAAAAGTCACACAATGTCATTCCCAACGTATCCTTTTTT
TCACATAGGTCAGCCCTACGCAATGTGAGAGTGAGGAAGGGACTACAGAAAAGAATGAATTCCCAGAGATGAGTAGGAT
CATATTGGGTGCCATCTTGGAGGCTGGCTACCAGTGAAGAAGACTGCTTTCTGGCCCTCAGTGATTTACTTCCATCTCA
CATGCAAAACATACTCCCTTTATTGTGGTTCCCAAGAGTCTCATTCTATTATGGCATCAGCTCGAAGTCCAAGATCTTA
TCATCTAAGCCAGGTGTACTAGTTTTCTTTGCTGTCTAACAAATAATTTAAAAAATGTAGCAGCTTAAGATAACACCCA
TTTACATGTCACACCTCTGTAGGTCAGAAGTGTGGGCAAAGGGTAGCTGGGTTCTTAGCTCGAGGTTGAAACCAAGGTG
TTAGCCATGGCTGCGGTCCTTATGTGGAGCTGAGGGTTCTCTTTCAAGCTCATCCAGGTTGTTGGCAGAATTCAGTCAC
TTGTGACTGACAGACTGGTGTTCCTAGAGACCACCTGCCATTCTGTACTGCGTAACCCTCTTCACAATATGGCAGTTTA
CTCCTTCAAGGCCAACAGAAGAATCTTCCTACTGCTTGGGTTCTCTGACTTCATTTGACCCTGACCTCTAAACCCAGAT
TTAAAGGTTTTATATGATTATATCTGGCCCACCAGCAAAATAGTCCTTTTTATTAACTCAAAGCCAGCTGTTTAGTAAC
CTTAATTATATCTGAAAAAAACAGAATCAAAGGAGTGGTATCTCGTAGTATTCACAGATTCTATCCACACTTCAGAAGT
GGAAATTACACAAGGCCTGAACATGAGGAGATGGGAATCTTAGAATCTGTCTAACATACCAGGTCTATGTGCAAATAAG
ATCAATCTCTGTTAGTTTACTCTTATGGGGTAATTAATTACCCCAAAACTTAGTGGCTTAAAACAATAGCATAACTAAC
TTCTCAGTTTCTATGGGTCAAGAATTCAGAAGCATCTTTCTTCAGTGGTTATGGCTTTGGCACTCATATGAAGTTGCAG
TTAAGAAGTCAGTCAGGGTGATAGAAATATAAAGGCTTGACTGGGGCTGGAGGATGTGCTTCTAAGGTGATTTACTCAC
ATGATCAAGTTGGTATTGGCTGTTGCAGGCAGGTCTCATTTCTTCCGCAAATGAAATGCTCTCCAGGCTGCATGAGTGT
CTTCATAACATGGTTGCTGATTTACATTGGATGGAGAGATCAAAGAGGATGAGAGGAAAGCAGCAATGTGTTATAGGAC
CCAACTTCAAAAGTTACACATCATTGCTTCTGCCCTATTCTGTTGGGCAATCCTGATGCAATATAGGAGGCACCATGAA
TAGCAGGAGGCAAATATCATCTGGGCTTTCTTGTTAACCTCAGTTAACAACAACAAAACAAATATTTAAAAAACTAAAG
GAAAGAGATTTCTGGAATATTTCCATTCTCTGTCATGCCCACTGCCATAGTCTACTCAAGTTCTCATCTCCTATTGGAC
CTCTGCGGTAGCTTTATAAGTCCTGTCCTTGTTTCCAATGTCATCCCTTTCAAAACGCTTCAAATAGCCTCCTTAAAGC
CATGACTCCTCCCACGGTTATAACCCTGCAGGTAAAGGCACTTGAGGACATAATCTGTACCATCTCTGGCGTCATCCCT
TTCATTCCCCTTCACCTCCCCCAACTATTTTTGTATTTCAGTCATGCTGGACCTCTTAATGTTTCCCCAAAACATCCTA
AGCAATTTCACGTCTCTATGCCTTTTCTTTTCCTGTTCTCTTTGCCTGAAATAAGAACGACAGATAATAGTGACTATGC
AAGTCCTAAAATCGAGGCAGCCACAGTGCTAAATCACACATTGGATAGTTCAATTTTATTCTTATAACAACCCTTTGTG
GTAAATCTTATTACCATGCTCATTTTACAAATGGGCACTCCTAACCCGATGTGCATAATGATTAAAAACATAGACTCAA
GAAAAGTTTGGAGGTTCTGGCGTAACCCTCTTTGTTATTCTCTATGCAACTAGCTTAAAAATAACAACTTTGATTATTC
TAATCTATTAACCAGTTTTCAGTGTGTCTGACCAAATCAGTTGAATTTTATTTTTTTAAATATGTGTGTGTGTGCATGT
GTCAGTATGTACGTGTTAAAGAGTAGAGGGAGGAAGTTGAAAATCTGACATTTGATTTATTTCTCCTGGGACAAAGGAA
GTTTGGATATGTCAAACTGCTGGCTAATCAACACGTTAATCAATGCAAATCTCTAGTATGGATATAGTTATATTTTGCC
CCCCTCTTCCTTTCCAAACTTCTTTCCAGTCTCATGACCAGCTTATTGGCTTCATATTACCAAGTAAATATATCAACTG
CCCATATGTATAGTACCCAGACAATGAGAACACTGCCTAAATATTGTGTTTTCAATACTACTTGCTTTTAGCAACAAAT
CATAGCACCCAGCCTAACTTTAAAAATTCCATGTCATCCAACTTCAAACTATAACAAAAATTGAGTTTTACAGAAGAGT

Fig. 9.162

TTCAAAACATTTTTATGCATTAGACACTTCAGAAATTATCTCTTAAAAACAAAACAAAATAAATAAGGGACAAAAACAA
TAGAAAACGTCAGGCACCAAACTGTGAACTCTCTTTTGTCCATGTATGATTTAAAAAAAAAAAACTCACTGATGGTAAT
TTAAGAAATTTGACCTTTAGGAAAATCAGGCTGAGGCTCATCTTTGTACTTTTTAAAACAAGTCAATAAAACATATAAA
TAATAGAGATGAGTGCCGCTCACAGGGGACACTCATATTTTCTAGGAGCCTGTGGATATAAACAATGAATTTCATGAAC
ACAGAGCACATTTCTACATGATCTCCTTTTCTTTACAAGTTATTTATGTTTTACTGGAAATATTAAAACTTCATGTCTC
TTTGTTGCTCTTGTTTCTTTAAATTTTTATTTTTATCATCAGTCATTGTTCAATAACTCAAAATCATATAAAATAAAAC
AGTTTCAACATCATTCCGTACTCAAGATGATCTCTATTAAATAATGATTTTTTTCTTGAAAAAGCATTCTATAATTTTT
TTTAGTTTTCCAGATGACTATTTAAACCAAATGTTTAAATGAATGATTAATGAGTCTTTTATCTTATTTATCCCACCTG
CCTACTGCAAAAAGACATGAATTTAATACATTTTAGATTTTAAACAGTTGTATATCTGTAAAAAAACAATTTTTACAGG
TTTCATATTCTGGACACTAGAAAACACTTCCTCCTCACAGCGCCGAGTTGTATGAAAAGGCAGCTCAATTGTCTTTCCT
TGAGCAGCCTTGTGTGCCTGGGTATTCCCTTCCATCTCTCACCCATGGAGTTCATATTCCTGTTGTCATGTCACCACCT
CTGTCAACGAAATAGGTTCTGCCATTTCTCAAATTTTATGGAGAATTATCCTGATGAGTTAAGGCAGAGGTTGAAAACT
TGCAGCCCTTACCCCGGTTACGGATTTTATTTTTAAAACCCAGTGTTTTTGAACACTTTACAGCTGATATTTCTATTCT
AATGGATGCATTATCTTCTTTTAAAAATACTTCCTATATTAGCCCTCTTAAGGGGTATGAAGTGGTGTCTCATTGTAGT
TTTGATGTGCTTTACTCACTCTTAATACCGTTATTATAGGTTATTTATTGTTAAAACTGTGATATATATTTTCCTTTATTT
TCTACATATACATAGATAACATGCAGTTTGATAATCTGCATTTAATCGCATTAGAAAGGTATTTTGCTATGTCATTAAA
ATTTTTTTGTGAACATCATTTTTAGTGGCTGCAAAAACTTACATAAAGACAGACATGTCCTAATATATGTGTGTGTATA
TTTTAACTAAATATTGGCACACCAAAAATAATGGATTTAATGCAACTAGCAATGATAATGCTCAAACAACAGGAGTGCT
ATGAAGACAATGAAACAGGTGAGTTGTCAGAACACCTTCTGTCATTACATTAACTTTTTAAGCACTAAATTCACTTGA
AATTACAATAAACAAGATAAGTACAAGCATTAGATAATTTGACCTATCAGATATCCCAAAGGCATAAACTATCACTAGA
GGGTCTTTTCTTTATGCAATTAGGTGACCAGTGACTCTTATTTTTTAAAGCTTTTAAAATAAAAAAATAGCTTTAGGGA
TAAAACCAGCCAGATTTTTATCGTCAAAAACATGTTCACAGTTCAGCTAAGCCTTGCTTTCTTTTGAAGAATTGCTCTT
TATAATGCTCACCAATGGATTTAGAAATATCCCATTGTAATCATGAAGATCTCAATTATATGTTATGAAATAAGAAACA
TAATGAAATACTTGAACCTTCCTGCCCCGCATAGCAGATATATTTTTGTATTTATGATATTCACAGTAAAAAGCTGTG
CTGAGAAGCTCAAAATAGTATTTGATCTTAGTGGTTTTGGAGCAGAGGAATTGGCATTGCCATGATTTTTCTATAACTT
GGCGCAGGCCAATGGTTTCAGGCAGGACTTTCAGAGCAGACTTCTGTCAAATTTGCCATATGGAGTTACTGGGCTCAGA
TTATAGAGGTTTTCCTGGTTGTTTGCCTAATTTGGGAATTATCAGTGCTCTCCAGGATTTTCTCCAAAAACAAAGAACA
TGTTCAGAAGAAACTGACACTTCAGGAAGAAAAGTAGTTTGATATTTGAGAGGTTTAGATGGTTTCTAATATTTCTAAA
AGGTACCATGACTCGTGAAGAATTTGACTGGTAAAAAAGAAAGGTTCCTGTTATCCCTGGAACACAGCTAACAGTCTGG
CATGTAGCCTTACCTGAACTGGTACCCTCCCCGTACACCTCACACTTAGCATTCTGCACAGCCAAAGACCCTGTCAGTT
ATTGGCCAGCCTGAAGAATGAGGTTGAATTCAACTCAGGGACTGAAATCTACTTTATAGCATTTTAAAATATTGTAGAT
CCAACCTTGAGTTGACCTACTCCGCAGGTTCATGGGTGATTAGGTGTGAGATACAATGGGAATGAATATCTGAAAACCC
TTTGCAGAAGAGAAGGAGGAGGAGGAAGAATAAATCCAATTTTTACAGGTTTCATATTCTGGACACTAGAAAACACTTC
CTCCTCACAGCGCCGAGTTGTATGAAAAGGCAGCTCAATTGTCTTTCCTTGAGCAGCCTTGTGTGCCTGGGTATTCCCT
TCCATCTCTCACCCATGGAGTTCATATTCCTGTTCTCATGTCACCACCTCTGTCAACGAAATAGGCTCTGCCATTTCTC
AAATTTTATGGAGAATTATCCTGATGAGTTAAGGCAGAGGTTGAAAACTCGCAGCCCTTGCTCCAATTACAGATTTTAT
TTTTAAAACCCAGTGTTTTTTAAAAAATCGAGGGAGTTTACACAAAAATTCATGTTTTCTGTTTCTCTAGAAAACAGCA
AATCTGGCAACACCCTGCTCACATTCCCACCTACCAAGAATGCTGCACATTAAATGGTGGCTTTTCTTTAGGTGACTCT
AATTCACTGGGGTCTCCATGTGACGTTTCAGCCTTTGCACCCTACTTGTCCGCTGCAGGCCCAGGAGCTCTCTACTCCT
CATATGCATTACAGGACCCCATGCACATTGAAGATGTTTTCTCAGGCAGAGCAGACACCAGGCAAATATCTTCTGGTCT
TAGGAGCAAGTCTTCTGAGAATCAATGATGACAAATATCTTAAATGGTCTACTCGATGGTTCTGAAAATGTAAGAGCTA
AACTACCTGTATCAAAATCATCTTGGGGGCTTATTTAAAACATATATGATAAGGCCCCACCTCAAACCTAAGGAGTCAG
AATTTCTACGGAAAGGCTTGGGAATAGGAACATTAACACAAGCATCCCGGGTGGTTTTTATGAAACAAAGCTTGAGAAT
TATTGAATTCTTCTCCGATCTGACAGCTCTTCTCCTGGGCAGACCCAATTAGAGGGAACTGATGAGTTTTAGGAAATAC
TGTAATTCTAACTCATCAGTCCAGCAGTGCTGAAAATGCAGAATTTTGTCCTTATCAAAAGCCAATTAATGCTAACCTT
TTCAGTGTGTGTCCAGTACCACCATCGGTAAGGTAAATAAACAGGCAGTTTTGCATATAATCTAGTGATTTTTAATTTA
GTTTTTTCCCTTACTCATCCTAAAAAAAGCAGGGAGTCATTGGGCTTTTGTATCTATTTTAGCTGAGTTATTATTTTAA
CCCCTATCTTTAGTGCAGAATTAAAATATCACCCTTCTATTTGCTTTTATTCCTAATATCTGAATGGTTTCAGCTTGAC
GCAATTAGCATGTAGAGCATGCTCACCTACTGTAATCTCCCAGATGAGTCACTCAGCTCCAGCACATAACTGCTTCTGG
GATCCTGTTGGCTAACCAGGCTTTGAAACCCAGGGAAAAGAACTGTGTGTTTTCTTCAGAAGTAATCCATAAATGAGAA
ATTACCATAAATAGGCAGTTTTATTCACTCTAAGTGATTTTTACATAAAAACTGACAAGGCCGTAAATTGTATATAGAA
TCAGGTTCCATATCCACACAGCTAATGCACACATGAATTATTCGATGAAATTTGCTTCAGTAGTATTATCTGAAATTGG
TTTCAGACAATACATTAAATGTTACACATTATGGTAAATTTACTGTATTTTTGTTCCAGCCACGTCTTGTGTTGGCAAA
TCTGCTAAATTTAAGTTTGCATTGTATTCACATGTGTTGCTATTTCCTGAGATGTCCCAATATATTTTAGCCATCAAAC
AAATAGAACTTCACCTCTCTGAGGCTCAGTATCCACACTTGTTTATCATGCAAGAGACATGCAGGTGAGAAAATAGGCA
ACTGCCATTCTATCTGTGATTGCTGTTCATGGAAGAAGTAAAAATGAGCTGGGACAATATATAGGTGGCGCCAGGGATG
GCTCCTTGAAGGAAGTGATCTCACAGCTCAGACCTGAAAGCTGAGTGGAAGTTACCAGAGGAAAAGAGAAAGGGAATGC
ATTGGTTTTCTATTGCTGGGTCAGAAACTACCACTAACTCAGTGGCTTAAAGCACCATTCATTATCTCATGTTTTCCCT
GGGTCAGGAGTCAGGTGCGTATCAGAGTCTCAAGAGGCTGACATCAGGTGTTTGCAGATGGCATTCATGTCTGGGGCTC
AGGGTCCTCTTTCAAGCTCCTTCAAGTTGTTGGCAGAATTTAGTTGCTGTGGTTTTAGGACCGAGGTTCCCACTTTCTT
GCTGATCACCAGCCTGGGGCAGCTCTCAGCCCCTTGAGGCCACCTGCAGTTCCTCATCCTTTGGCAGATCCTCTCACAA

Fig. 9.163

CGTGGCCACTTACTTCAAGACCAGCAAGAGAATGTTCCTCTTCAGGAAGGGCCCAACTCCTCCTTATGGATGTTCTTCT
GATTCAGTCAGGCCCACCCAAAATAATTGCCATTTTTGGTTAACTCAAAAATCAACTGATTTGAGATCCTTAATTACAT
CAGCAAAATCCCTCCACCTTCTCCATACATAATAACCTAATCATGGGAGTGACTGTTCATCCTGTTCGTGATTAGGCTC
ACATATAAGAGAAGGAGATCATATAGGACATGCATGTAGAGGATAGAATCTTGGGGGCCATCTTAAAATTGTGCCTACC
ACAAGGAAGGATTTTCCAGGCAGGAAGAACCAGATATATGAAGGAGGCCTAAATGACAGGATAGCAATTTCCAGTGTCT
GAGGCTAAGGCTGGAATGCTGACCTGGCCAGATCATGCACTGCTAGGTTTAATGGCCTATGCATACTCTATTATGCAAT
TATTAAAATACCTGTTTACAAAGAATATTTGAAATATTAAAAAATGGAAAACTGCATACCGTAAAATATTAAATGGGAA
AATCAGGATATGTGTTTATATAACATAGTATCAGTTTTGGAAATATATATGCATATCTTAAAAGACTAGAAGTAAATAC
ATCCATCTGTTAGCCATGGATATCTCTGGGTGAGAAAGTATGGATGAGTTAGAGATTCTTTGTCCCTTTTCTTAGTTCT
AAAATTTGCCACAATAAATATGTATTCTCTTATAATAATAATTAATTAAAAACCTATTCATGGTACTTGCAAAAACAAA
TGAATTTGAGCAGTCTCTTTGAAGGAATCAAATTTTGTACTCCAGGTGTTTGAGAGGTTGAAAAACAAGCTCAGGAATT
AGCTGCGCATGATCTGTACAAACAAGGGGATCAGTCAGTGGAAATGAAGTCCAGCTTCAGCCAAGGGTGGTGAGTATAA
CAGACCTACTCTGATATGTTTCATCACTAAACATTGAGCAAGAAATCTAGTGTTTAAATTATGGAGGCATTAAAGCAAT
TAACCTCCCTCTACCTCAATTTTCTTATATCTAAAAATTGAGGGGAGCAAAATTCCATTCTTGTCACAGGTCTCAATTG
CAAGTAGCATGCAAGCAAGTAGGCTGAACTCTTGTCTGTCAATCTAGCTCCTTCCTGGATGGGGTATTTAATCAGCTCT
CCTTCCCAAGCACCCAGTGGACTTGAAGCTCACAGTTAGACAGAGATGGCTAGAGGTGCCAAGTGCTGTTTATCATAGG
TGACATCACCTGTGTGCTCAGAGTTATAAACATAGGCAGCTTGCCTACTGCCAAATCCATTACAACTTTCAGAGGTGTT
CACTTAGGAAGAGGAGGAAAGAGTTTTTTGAGAACCAGATGGGAACTTAGAAATAAGTAACATTGACAACCAAATCCTT
CAGACACATCTTCAAGTTTCAAGAGAGCAGTTAACAAAAAAGAAAAATGTATTTTTAGAAATTGTTTGGGAGGTGAAAG
GATTTTTCTGGGGGGGAGTAGGGTAGGGAATGGATAGAGATGATTTTTTTTGGCTCTGCAATATCTCAGAGATCTTTG
AGTTGAAATATAACAAAATGTATTTCCTCTCTCTTGCTCCAAAAACTGAAAAGCAAGTGCACTAGAAAATGTCAGAGTT
GGCCACTGAACAGACCATATTTCTAATTCATGGCAAGATGGCTAAAATAAAAATTCTTGAAATACGTATTTTAAAATTA
GATTTTGACCTTTGATAGGGCTTATCATGCTATTTATATTGTAGCAGAAGGAACTGATTTTTTAGTAGTTGCCTCATCA
AAGACATGACTCACATTTCCTTAAGCATTTACACCATATGTTTCCTGAGGTAAAAAAATAAATAAATAAATTTTATATT
TTTTATACAATTAGTGAAATGTGAGCAAAAAATATAAGAAATCATTTAAAAAATATTTTGGGGAGGATGTGGTCTAGAA
ATGTTGTTTTCTAGAAATTGAAATTATGTTAGCTATTTGGCCAGTGTAGCCATTAGGTACATTTATGAATATAGATGAG
AAGTAATCATTGTGATGCTAGTTTTATCATTAAGGAAAAAAGCAGAATTCAAAAGTTTAGCAATGAAACACTGGTACTA
CTGAAACTCACTTTATATTTGAAAATGTGAATGTGAGTTTAAAAAAGCTTTTGTTAGACTAACTGAAAAGAATCATTTT
AACATTTAAAAAGAAAAATATTATTTTAAGTGACATTTGGTGACATTATTATATGTGTACAAGCTGTGACTATAAGATA
ATGAGACAAATTATTATGTGGCCAGTGGAAATTAAATTTATCTTTATGATTACTAGCAACAGGGACTATTTTATTCAAC
TATCTTTACATAATACAAAATTATTGTAAAATTTCTAGGAAATTCATATTCCACTTAAAATATGAGGAAGTACATTTGG
AAAAAATATTAACATATGAAAATCAGCATCCCAGTTAAGGAATCCCCAGTTTCCCACTTGGTGCTCAAATCACTTCACG
TTTTATTTCATTGGTACTTTTTCTAGGGCAGTAGATTTAGGAATAGAAAACAGACTCTACACATGGAATACACTAAAGT
CTTGAGGAGGTGTGATATTTCCCTAAGTTTGGATAGGTGGTATCATCCTTTCAGTCACTCTTGACTCTGCATTAGACTC
TCTACCTAATGATCCCCAAGTCATTTCACTTCTGCCTTCTTAACATTTTGAAGATGTCCTCTAAAATTTCAAGTCCCAC
CATCTCTGCCTCCGAACTCACCTCCCTGACTTTCAGTCTTGAAGCACCTTAACAACCCCTCCCCTCCTGTGCATGTTCC
ACCTGGAAACCAGGGTGATCACTCTGAAATGCCAATCTGATCAGTCATTTCCCTACTTTTGAACCTTCAATAACTTCCT
AGCACCTATTCCTAGAAACCATTCCAACATATCACCTAGGCAAAGGAAACCCTTTTCTTACCTGGCTCCTACTTATCCC
TCCAGATTCACCTTTTGACACCTCCCACTTCATCTCTCTGCAGCCCCCTTCCTGCACACACACGGAGTTTCAGTCTTGC
CAAACTCTTCGCAGCTTCTTGAGTGGACCTTGCTCTCTGCACTACAATCTCTTTCTGCCTAGAGAGTCCTTTACCTCCC
CCAATCTGGTTAACTTCTACTGTTTATTTAAGTCTTAACTCTAAGTAGATGTCATTTTTGAGGATGCTCTCTCTGTTCC
CACTTTGGAACTTGGGCTTCTCTGTTGTCCTGGGTGTCCCGTGTATTCCTCTGTCATAGCCCTCATCTCATTGAATTGT
AATCATGTCTTCACTAGTGTTTCCTTTCTAGCATGATAGATTTTGTATTGCCAGTGACCCCAACAAATTCCCCAGGTC
CTAGCCCTGTGACTGGAACACAGTAGGCATTTAATAATAGTTGACAAATGAGTTAGTATATGTAATGAAAAATCTACCT
GCCTGAGCATTAGGAAATATAAAATTAATCTAAACTTTGCCACTTTCTGTAATATCTGTGTGTCAGTCAGGAATGCTTT
TGGCTGCAAGAAAACCCCACTGACAGTCTTTTAAAACAAATAAGGAAGTCTAAAAGGAGTCAGATGCTGGCCTTGGTTC
AATACAATGTTAGAGGCAGCATCTCAGTGCTTCTCTAATGGTCACAAAATGACTACAGTAACTCCTTCCCTCACATCCA
CTTCCAGTTCAAGAAGCAGAATGAGAGACAGCAATAGCCACCCTGTTTCTTCATCAAGAAAGCAAAGATATCTTAGAAG
TCCCCACTGTCCTTCATTTACTTCTCATGGGCTAGAATTATCTCAGTGGCCACCCCAAGTGCAAGAGAAACTAGGGAAA
TTAGTTTTTAGCATTCCCACACTCTATGTTGAAAATGAGTAAGAGACAATAATTTGGGGAATAGGTGTGGGATTAGTCA
GCCAACAGTGTTTGCTACACCTTGSGACAAAACATTTTACCTCTCTTACTCTTTGATTCTTTCATTGAGTGAAGAATTA
GAATAAGTAATCTTTCTTCAAGAATCAATTTTCTCTCATCTATAACTCCCATATATTCTTATTTCCAAAATGGAATTAC
CTTCTACACCAGACAGTTACTTCAAGCTTTTCCCCTGAATATTTCACATTTCCAGAAAGCACTATATTACAAAGAAGCC
CTTCCTTTTCAAGAACTCTATTTGCCATAATGTTCTCCCTAACAAGGGCTGAACAGTACGTGCCCAGATTCCCTGCCTC
TGACCTCACCACACCCTCTTCTGTGTGGCGGTCTCTCAAATTGTTTAGGACAATTATCATGACTTCTCTAAATCTCCCT
TTTTCCAGGCTCAAATTCCCTATGCTTCAGTAGTTTTTCAGATAAGCCCCTTCTGTCCCTTCACAACCCTGGTCAGCCA
ACACCAGACATACTCTCTTCATTTACTTATGATTCATTGAACAGATAATCACTGAGTTCCTGCCATGTGTCAGCACTGC
TCTAGGAGCTGGTGATATGGTGAGAAACAAGGAAGGGAAGGCCCCTCCTCTCATGAGGCTTACAGAGGAGCAAAGGAAT
CAGATGATAAGATAAGCGTTACACACACACACACACACACAGAGGATCATTTCAGAGAGTGATTCGTGCCAAGATGAAAAT
GACAAAGGGAGATAGGAGAGTGACAAGGGATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGGCAGTGCACGTGTGA
AACTAGAAGACAAGCCTTCAGATGATCAGGGAGGTTTCTCTAAGACCTGAATGGGGATAATTAACTAGCATGGAAGAGG

Fig. 9.164

AAGAGGTTTTGAAGCAGGAGGACTTTGTAAGTGAAAGGCCCTGGGTAGAATGAGCTAGACCTGAGCCAGGAAAAAAAAG
ATGCTCAGAGGGGGAAAGTGTTGGAAGATGGCCTGATAATGCACATGGGGAGCCCCCCACCACAAGCTCATGTAGGACA
GGACAAGAACTCAGATTGTATTCTAAATGACAGTATTTCAATACCCATCTTAAAATGTGTCTGGACAAAACTTAACACT
TAGCTACACATATAGCCTGACTGGAGCAGTCCAGTTTATAACCTCTCCTTGTAGTGGGCACTGTATTTCTATGGATGCA
AGCTACAGTTATATGACTTTTGTGGAAGCCATGCTATCCCCACAGTTCCACTGTGATTTCCTATATGCTCTTTGATGCA
CACTGCTCACATGCATGAATATTACTTGCACAAAGAGAGAGAGTAGGTGGATGTGATGCCAGGAGCTATTAGAATGATT
CACATTACACTTCCACCATATGAAAAATAATGTACAGTCTAAAGCAACACTGCATCATATCATCGAGCAGCTTGGGAAA
GCCTAAATTACATATTTGAAGTTCAGTCAGTCATTGAAATTAGATAATCTGGATGGTCCTGAAAGTGTCTTTCTTGAGA
GCTTTCCTCCAAAAGCAAAATTGAATGGTAAGGAAAAAAATGAAGTACAACAAAAATGACAGCAAAAAACCTGAAAAAC
AAAAAACAAAAAACAAACAAACAAAAAACCCCAAAAACTGAGTAATATCAACCAGGCAGGAGTTGAAGGAGAGAAGCCC
AACTGTTGGTAGATAACTTGGGATGAGCCAATTAAATATTGGTCTTCTCTCTCTCAGAGGCCCTAATTGCATTCCCTCC
AGCAGCCACAGGCCTGGGGTTTTCCCCAGGCCTGTGGCATTCAGACATCAGAGCTGAGAACTCCAGTGACCACCAGGCT
GCATTTTAATGCTAAGCTGGGAGCATTGATACTCTCCAAGACAGCCTTGCAAGCTCCATCTTCCACTGACTCAACGTTC
AGTGGAACGTTCAGTGTGTTTCATCTGCTGTTCAGTCATGCAGGCAGCAGGGATCCTGAGGGCTCTCCTCCCCAATATG
GTACCAAGTTTTGATTCATCCTTTTCCTCTTCCCTATCAGCAGGTATTCTAGAAGACAGTTTTATGATGACATTCACAG
CTAGCATTAAAACCAGATAAAAATAAAACAGGATGTCAATAAAGAACTAATGATGTGTGTCTGTGTAAATGTATAATAA
TAATAAAAAGAATAGACATCTGTTTGTCAAGGTACCATTTAAGGCCTTGGGGCTTTAAATGAAACTGCTTTATAAATGC
ACCAACATATGTGACTGTTTGCCTACGTCTTTCATCCATGAAAATTGCCCTGTAGACAGTTGCCTTTGAGGTGAAAAGC
ATTCTATAGGCACTAAATATTATGCTAGAACACCTCTAAGTGCTAATCTAACTACCTTCATGACGGAAGTTTCAGGAGA
ACAATTTAAGGGTCATGGAAAAAAAGTGTTAAACGAGTTGGTAATCTGACATTTCCTAAAAACTAGATTCAAAACCGAA
GGGAAAGTAGAGAGAGGAATCAAAACTAGCCTAGTAGGATGGAAGTAGGCCTCCCTCCTTGGAGGTGTGAAAATGCCTG
GAATAATTTAGGCAAGAATGCCAACTGTCAGTGATGACCTTGGTTTAGGGGCAGTTATAGCATGGTGGAAACACCCCTG
GACTGGAGATCCGGCATCCCTTATGGGGATATGAAAGAAATTTGGCAGGTCTCTTAACCTCTTTGACATTCCTTTCTTC
TTTGTTAGGTAAGAAGCTGGTGCTGGTTCAGTGTAATTTGAACTGTGTTCTGCATGACTGTAGGGTTCTGCTTAGTGCC
ACGTGGAGGTGGGGATGCCTTGGGTGAAGATGAAGGAGGTGTAGTAAGCAGGTGGGGCTCTGCACTCTTTTTACTCTCC
TTCTTCCAGTATCATCAGAACAACTCCACTTTTTTGTCTTTATACACTGAGTTATTTATAAAATCCTAGTTTTTTTAAG
TGTCAAACAATGCTTGATTATGAAATGATAGCATTATTCTAGCATTCTAACTAAAGTGTGTAAATTATAAACAACTATC
TTTAATGGTCAACAAATTGTCATCATTACTGAGCAGTGTTGTTAGTAACACCAAGTAATACAATTAATGAAATCCTTGA
AAGTAGAACCTATCAGTGAGCCATGCATACAACTGATAAGCTGTGGATAATGTATAGAAGAATGAGTTCATTTGGTAAT
TATTTGTACTTTTCAAAATATTGGTGAACTTTCATCTTTAAGGAGCAATGGTGTCCTAGTTATTCTTGCCACAACTGCA
TGGAAACTCTCGAATCTGTTAGTATGTCCTTGGGCACAAAAACAGTATTTTTTGGAACTGCTCAAAAATTATGTAGTTT
TGTAGACATTTAGGGAAAAATCTCATAATTTATGTTAAACACTCAGTTGTCTTGGTGTTGATTGAAAGCAAATAATACG
TGCTTAACATCCTGCTAGTTGCTGAGGGAGATTCATTCATCATTTTAGAAAATGTTTCTGGGCATCAGTCATATAATAA
ACACTTTCCCAGCACTTGGCTTCACAAAGGAACAAAACAGACAATGCACATTCCTGCCCTAGTGGAGCATATATTCTAG
ATGACAGACTGAACACCTAGACATATATGACAAGCTCTTTCTTGCAAGGAGAGTCCAGTTAGGAAAATGTCAACACCTA
AAACAGTTAAAGGCTAAGATAGCTTCTGTGGACACTAAGTGCTACATAGTAGTTCCAGAGGAGGCAGAGAGTTAGACCT
GGCTAGACACTGGACAGGGGGTAGAATTAGACAGATAGTTCCTGGCTTGGTGCCTGGTACATAGTAGTTGCTCAATAAA
TATGTGTTGAATAAATGAAAAACCAGGACTGACTGAATAGACAGTTTACACATTTACATAATAAGTGTGTAATTTAGGG
AAGTGGGGTTAGAATGAGCCTGGGTGAAGGAAGCCTTGAATGAGAGATGGAGAACTGTAAACGATAAAGGTTTTGAAGT
TGGGGAAAGGTGAGGGGGAAGTGAAGTGTAACATGGAGAAGCAAAAGTGTGAATATTTTCCAAGATGCCTCGACGTTAT
GATAGATGAACCTCTGAGACAGAATGTAGGGGGAAGATAGAGGAAAGAGCCAAAGAGCCTCTGAGGGTGCAAAGAAGTA
AAGAAAAACCAGGATGTATGATGAGAATTTTATTATGGAGCTATCCAGTGTGGATGTGACTTCTCTTCCCCATATCGAC
ACAAAACACTTAGCAAAACATTTCTCTTTCTCTCTCTCATGCTCTCCTGTTCTTTCTCCCTCTATCTCTATCTCCTTTT
GCTCTATCTCTAGATATCTATTAGACAGATGATAGATAGACAGATACATAGATAGATAGGTAGATAGATAGATAGGTAG
ATAGATGATAGATAGATAGATAGATAGATAGATAGATAGATAGATAGATACATCTTGGAAGTGGTAAGACAGAAAAAGTAGTG
AGTATAGCCTCAAAATGGCTGCAGGGCAAGGTAAGAAGCTGAGCTCAGCCTTCAATCCAATCCCTGTTTACACTCTGCC
TATTTATTTGTTTATAATATACTCTGACTCCCCATCGACATATTTACATTCTTGGTAGAAGAGATTATTTTTGATATCT
CTTTGTATTTATTTCTTAGCACCAAGATAATTTTAACCACTATTTTATTATTGTAAATTCTATTGTTTTTACTCCAAAG
AAATACATATTTGTTGAAGAAAAATTAGAGATACAGATAAGTTAGGAAAATAATAATATCAGAAAACAGGGCCATCATT
TAAAACATGGTTACATAAATAATAAAGTACTGTGCTAAGTATTGTAATGATGCTGATGCTTTTGTAATAATGATACTGA
TGGTGAAGATGGTGATGGTGATGATGATGACAATGATGAACACATACCTCCCACTGATTATGTGTAAGGCACTGTTCTA
AACCTTTGTCTAAATTAATGCATGAAGTCTTCACAACAGCCTCAATAGATGTTATTCTTCCTCCCTCCTATTTATTTA
TTTTAGCATATTTTATAGATGAGGTATCTGAAACAGAGATAAGCAACCTGGCCTGAGTCATACAACACAAAGTGATGGA
GGTAGGAAATGACCCAGACGGTCAGGCTCCAGTTTTTTGGGCACTACCAAATTATATTAATAATACAACTCTGTAGCAG
CCTGCTTTCGAGTTATGGAATAGTTTCTAGAATAAGTCACACACATAGATTTCGAGCCCAGGACCATCTACTCTGAGCA
GAAGCTCCTACCTAACCTTGACTATAAACTGACTCTACCAGATAATCACACTTGGCCTTTCTGTAAGTGATAAGCAACT
TGCCTCTGTGGGCACCTACCCTGAGAAAGGTAGTCACCCTGCTCCATGCTCTGTTTCAAGTACATTTATTATTATTTAT
GAATTACTTATTAACATAAATTTATTATTATTTACGTATTATCCAACTTATTAAGTGATGTATATGTATGCAGGTGTGT
ATGATTATGAAATACAAGATGAAAGAACTGTAAGAAAATAGCTTTGAAAAAATTAGTAATGACTGGGCCATAGCCCAGT
GATAAGGCATGTTCACATATACCATTTCCTTTCATGATGGTAACAGCCCAGCAAGGTAACTGTCATCAGGGCTGTCATG
TATTCTAGTACTGTTTGTGTACTGAATAAAGGCATTTGCCTGAGGGATGATAGGGCTCAAATCCAGGCTGCACTCCTCT

Fig. 9.165

TGATGATCTATGAACCCAAGAAGATGAGTCTACCTGGAGGGAAAGGCTTTTCCAATATGCACAAAGTTCCACAGAAGCT
AGAGTTGTCTTGGGAATGATTATCTCCATTTTGTAAATAAGGAAATTAAAGATCAGAAAGATTGAGTAATTTCTCAAGA
ATATGTATCCAGCAAATAACAAATCAAGGACTCAAACCTAGGCCAATATGGCTCTCACTTCCTTTCTCCAAAATCACTG
CTATGTCTTTCAACTAAATTGCATTGCTCTGTTCACTGGTACAAAGCTTGTTGCACCATTTAAAATTCAAGGACTATCT
GATTGTGTATTATATTTTTAGATCCTTTCCTGAAAGCAGGTTTAATGGGGAGGGAGAAAGTAGCAACTGGAAGAGAGT
TTTGAGATGGTAGATGGTAAAATGTGCAAGCAAATTCCCAAAAAATCTGGGGACACAGACTTCACTGCCTTCAGAATAA
TTGAAAGGAGAACCCTTCAAGTATGAAGCTTCAGCTGAAATTTCAACGTGGTTTATTTACCTAATATGCTGTTCATTAA
TTACAAGCTATTAGTGACTATTAGCCTATGAAATTGTATTTACAGTTCAGAAATGTATTTGATTTTCACAAGCCTTACT
GGGGAACAATGCTCAGTCAACACTTTCTTCGCCTAAAGAGTACGATCAAAGAGCATGAAGCGTAGTAAATGTTTAGCCT
TTGAATTTGGAGTTTACAAAGGATAATTATCCACGGGTTGGTGAATTCATGTTCCTCTCTACTCCACACAGCCTCTGGT
TTGCATTTACAGTTTTGCACAATCAGATGTAAAATTAAAATATAATCATTCCATTTTAAATGGTTCCCTGTACAATTAT
CTCATTTTAAATCTTTTGCTAATGTGGTTATTCTAATGCAACTATGATCATTATTTTATGTATGTAAAGATGTCAATAC
TGTCCAGCTGATGATATTATCTAATAGTATGTAGCAAAGCATGTTCCCTTCCTACAGTGCCTCACTCTTTCGATGGGTA
AGATGGAGGTGGGAGTGGGGGGAGCATGGCATTAGCTGTGGATAATAAAGCAAAGTAAGTACAATAGGTGTTCAATAA
AGTCATCATTTTTGGTACTTACGATGTAGTTTTCTTGTTCCTTTGGTTCCTTTTGCAGTGGGTGTATTTGCTTAGACAG
AGAGAAGTGGCAGAGGGAGACTGCATTTGTATTTGGTTATTTCAGAGAAATGCAACTTGGTATTATGAGCCTTTAATTC
TGTAGGGCAGTCTCCAGATCATTTTGATGCTGAACTTTGTCATAAAAAACTATTGATTTTTTTCTTCCAATTATAAACA
TTTGCTGGTTTCTTGTCAGTTAATAACTGACATAACATTATTTCAGACCTTTCACTTAGGGCTCTGTTGTGTGTTTCTC
TTGATCAAAATTATTGCCTTAGCATATCAACTGAATACACAAGAGAAAAATCAAGTTATCTATGTTTATCATATGCATT
TTTGAATACCTATATGTGATGCTTGAGCATAGTGGTTTTWATAATCCTGTAAGCGATTTTTCAGGAGACCAGATCTGAC
CTCCTCTCTCACACCCCTTTCACACTGCCTGCAACACACCACACATACCACACACATCACCACCCTGACCGACCAATGG
AATCTGAGCCAACTATAAATCTCAAACTTGTTGATATTGGATAATGCCTGGAGGAGAAACACGGCTACCGTTCAGTAAT
TCCAGAAAGAATTTCTTCTTTAAACTCAGTAAACCCAATGGCTTCTCAGAAAGTTCTTTCTGAGTTTTCTTATTTGAAA
TTTGAAAATTATTTGAAATTGACTTAACTGACATCACCTGTTCCCCTCTGGATCTCCCAGTGATTTACTGTTGACTCTT
TCAAATCCACTCATCTCAGGGCTGGGGACTGAGTCACAGTCTGCTTTTTCCTCCATTGTCATTTCCAAATTTTTCTTC
CCTCTCCTTGCTGGGGGCTGGTGCTAAGTTGACCCCATTTTTCCCTCCTTGTGCTGTCACTCACTGCCTTTCCAGAATC
TTCTGCATCAGGTCAGTCACTCTTTCCAACTTAATTCCATATGTCAACCCATTCATCACCGGAGCCACGTGGTTTCCTT
CACACAAATTGTCTTCTCTGCACCACAGATGCCAGTACACTCTGGCCCTTGCCATCTGTCCTTAAGATGCAACACCGGT
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TCCGGCCCCCATCTCTGCTTCAAYGAATGAACCCGTTTTCATCTGTTTTTCCATGTTGGGATTCTAGTCAGATTTCCTT
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TGAGATGATCTTTGTCCAATATTGATTAGTGGTGGAAGTCCCTTGATAGCCAATCCATATTTCTTTCACAGTAATAGAA
AGTACCAAACTTTAAAAATGAGATTAGAAGTTGCCTTTACATAAATGTTTAGGCTTTTGAKATCTCAGGGCTATTTTGT
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AAACATATTCTGTAGAAGCAATGGGGATTCATGATTATGAAAAAAGTGGCCATTGCTGGTTTAGGCAGTGTGTAAATGT
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GGAACTTAGGACAATGATGTTAGTGAATTAGAGGTCTGGCAGAATCAAACGAAAGTAATCCTCACCAAGTCACTAAACC
ACACTACTTTGAGTCTATGCAAGTTCAGGAATTTCTATTTGAGCAAAAGCCACAAATGGCCAGAGCGGACCTCAGGCTT
TGTGCTTGAACTGCCTAATGCCATTTGATTTTTCGATCCCGCACTTTTCCTTGCCAGACCAATGGTCTTTTCTAGCAGT
AAAATTTCAGAATAGGTAGGCTACCATCACTCTTTGGGTTACCCCAGTGTTTACTTAAGTTGAAATTCAAATAGATATG
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CTTTCTGGTGCTGACTTATGTTGCTGAGTCAAAGGCTTTCATAGTCAAAGCTCTTCTTTTTATCTGATATGTTTTGCAG
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ACTGCATTTTGCAAGTGCTTCTTAGGATTTCACTTTCATTTAAAGGCAGTAGATAGCTCAGAGAATGTGGAACAGTAAC
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TATGCAACCTCACTAAGCCTGTTTTCCCATATTTAAAAGTGGATTGTAATGTTTATGAGTCTACCACTACATYAGATTG
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CCATTGTTGTTATCATTATTAAAAATAACCCATTCTTTCAAAGAATCTTGTTCTTGGCCACCAAGCTTGGAAGTCAGTG
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TCTGGCCTCATCTTGACCATTCTATCTGCATGTACTAACTTTTCAATTTTAATGGCCCTGTGAGCTTTCCTCCCATAAG
CCAAAAAGTGCTGTTTTTCTATTCTAGTGTTTTCTTGTCAGGCAACAATAATTTCTAAATAACATGCCTCTTCTAAACC
AATCTCTTAAAAAAATAGATTGTTTTTGTTTCTGACCCTTTCTCATTCCATTTCAGAAACTATTTTTTCTCCTTCTTTAA
GCAGGTTACAAACCCTTATATTTTTAATATGCTGAGGCTTGTAGTCAAACCATTACTGTCCCAAAAGAAAAGCCCTTTT
AGCACATTTACAGCTTCTTGCTATCTGTGCCCTAACTAAATTGTGCTACAGGGATAGTTTCTTAACCATTAAAATGATA
GGTGAACACAATTTTATTTTGAAGGATTACTAAGCTATTTTTAAAATTTCTATAGTTAGAAAAGAAAAACTGTTTAACT
GAAACTTGAACCCAATTAAAATAACAATTCTCATGGCTCTCCGTTTTGCAATACTTTCCTATTCATAAAATAAGAATGT
GCACTTTACCTTTTTGACCCATATATTTGATGTTTTCAATTCTCTACACGTTCTTTATCTCTCTGTCAGTGTGGAATA
TTCTGATTTGTTAATTAATACCCAAAGCAGCAGTTGGCTATTAATGAAATGTACAGAAAGGTATTTGGTAAAGGCTACA
TGAAGATGATGATGACAATAACAAAGATATCTGATTGAAAGTAATCTTTACCTGTTAATCTTCCCTTAATGTCTCCGAC

Fig. 9.166

TACAATGGCAGACGTTGCTTTCTTGGATGATGACTGAAAGATTAGTTTGGAATGAATAAATTTATTTTTCCATGGTTGA
TTCATAGATTTTTTTAGAAATTACTAATTTTGAAAATTAAACCTTCTTTTTCAGCCTTTTGAGTTTTATGTTTCTATAG
TTTAGGCTTAAAAATAATGTAGACATTAGAAAAAAACTCAAGCGGTATTAATCCTTATATCCCTAATGGTAAAGAGCGA
GGCAGCTAACAAATGAGGTGCTGGAACACTAGCAAGGGAGCCTGTCTCTCTTCTGGTCCTTTTGTTGTCCAATTACAGG
TGAAAAGATGCTATCTGTCAGCTTGTCATTAACTCAAATACACAAAGGCCTGTCAGTTCTCTTATGCACTTGCCAATGT
GAGCACATCCCATATTGATGTTTCTACTAAGGCTTGCTGTACTTGTAAACAGTGTACTTGTCTGGTAACTAAATAGGGA
CAAGCATGCAGTAACAGTGTGACACTGAGCATTTCAGTTATATGTCTTCTTACCTCAGAATTTTAAGAAGAAACAATGC
TAAAGGAGATTTTTTTTTAAATTAAAAACAAAAACTACCTTTCCAGGGTATTTTAAAGAAAGAAGGTGAATTCCAATTG
CACATACATCCGGTATGTGTGACGCCAGGTTTATCCATGGCCTCTCTCGCCCTACTGCTTTTTAAGTAATATGGGAAAT
GCAAATAAACAAATAAAAACCTACTTAAATAGACTAGTAAAAAATTGAGCAATAAGGGATCATTGTATAATTAGATTAG
AATAGTGATTTTGCAAAGGGTTTAAAATGCCTTAACATAGGCACTGACAAAATGTTTGTAGGTCTTACTAATGAATTT
TTATGTTTTTTCAATGGAATGTGCATTAGAATGAGGCCATTAGTTCTTTGTGGTTAACCAAAATCTCAAGATTTCTTGT
AATGAGAGTAACTTTTCTTTCTGGGATCCCTGACAAACCGGAAGAGAGTGCTGCTGAAATGTGGGAAAAACAGCTGTGT
TATAACAGGAGCTGCCARCCCCCCACACAGCTGGCTGCAGAGATAATTAATTGTGAAGAGAGTAAGGAAGTAATTCACA
TAATTGTGTAAATGTTAAGTAATTTACATAATTGGGTATATATACAAATGGATTTCTTCCCTAAGCTATTTTTTTAAAT
ACAGAAAAAATCTAATCTACAAGCAGTTGATTATTAAGGAACCAATTTTTAAATAAACCAAAAAAAGTATCTATTCTAAT
GTGTGCTATTTTTCACAAAAAAAGTGTTTTCCTGTGACTGTATCCTGCATCCCTTGTTACAAGTGTGTGTGCATGTGTT
TGTGTGTGTGTGTGTGTGTGTGTGTAGATAAGTATATGATGTCTTTCTGGGACTATATGCTTAATCTCACTACAATTAC
TTTTGGGTTATTCCATCAGCAACACAAGTAAATCTCTCTAGATACTATTTATCTCAGGAGTGACAAATATGTGTTAAGA
ATGACTTCTATTACCCCTGCATTATAAGTTTATTTTTTCCAGTATTTTTTTCCCCTTTGATTTGAGACTTAGCCTAGGC
ATCATTCCCAAAGAAGTGCTCCAGACAGCCGCCATGAATGAATCAGAACTGGCCCTTGGAAGGAGGCCTACCTGCCGGT
CCTCTAATGGACATAACTTACTTTTACCTCACAGTGTTACTCAGTGCTTTATCTACTAGGGCTCATGAGATGCAGTGTT
CATACTGTTTTGTTTCCAGAATCCCTGGGTGTGTTTTATTCCCTCAGTTGTATATAACAGGACGCACAATGGGGTCAGG
CCAATATTTTTTGGCTCTTAAAAGGACTCTTGCTGAGGTTTGCCAGTACCTGCTGATCTGCAGCTCCCCCAGCTTCATA
AGCAGTGATAGGAGTACTGAGTCAGCCCCAAATTAAAGAACCATGCATAGAACAATGCCCTGCAGCAGACTCGTAGGAC
AAATCTGAAAGAGCATCCCCAGACTCTTGAGGCATAGATACCTCCTGAAAATAAGGGTCTGCCTTCTATAGGTCATTAC
TTTGGAACATTTAATAAAGCATTACCAAAAAGAAAAAATACATGTATTTTATACCCTCACATTTCTTTTTAGTCATCTT
TAGTTTTGCTTACAGTCTGATTACCCCCTCACTCCCAAATCCTTAGCTCCTTACAAAAAGGAAAAAAATATTTTCTATA
ACATATATCTGGAAGTTTTAATTTTAGATTTATAGTTTCACATTTTCAAGCCAGTATTTTTCTAGTTCCATTTTGCTCT
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TTTTTTTTAACTTGGCCTCAAATCATTTTTACTAAGTATTTTATTTGAGCCATCTTTTTTCTTTTTTCCATTTGTTTTG
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TATAAACAATTATGTGAAAATAATAAGTTAACAAATACAATATGACCTCAATTAACTGTCTTAATACAAGTGGAAATGG
CAGAGATAATTCCAAGAGCCAATTTTTTATTTTAATGTGTTTTTCATATGTACATTTTAATGGGAGCTTTTATGATATT
ATTTTTCAGCCACACTATTTCAAAGAAAACAATGGAGGGCATTTTGTGGAGATCAAATTCTGGTTGAGCTGTTTGGACA
CCCAGCTGCCCATCCTTTCTCTAATGCTCCTCCCGAGCACCCAGCATCATCTCTCAGAATTAGACCTGAACTAGCCCTG
ACCTGAACTGATTCTTCTGTCCCTGGTCTTCTCTTTCTAAATTATATTTTCTTGATGAGTATTTTCTGTTTCTAAATTA
GCATCCTCCTTCTGGGCAGTAAAATTGAGTGAGTATTAGACAAAATTGTGAAACGTGTAAACAGACATTGAATGGTTTA
ATTAATCAGCAAGATGTGCAGTTGAACTTGAAAGTAAAGCATGTGCATAATAATCCTGAAGATGATTGAAGATTAATTT
TAGTATCTGTGATCAGATAAAGACACATTTCAATGATGCAACAATGTTTAACACTTGCAGGCTACTGCAACAGAATACT
TCTTTAGGGTCCTGAAATCATTCTTGCTTTCCACAAACTTAGTTGAGTGCATTAAGAGATTCTGGCTCATAGACTACTT
CTGCTTGTTGACTCATGCCTTATCCTTTTCACAGGATCACTATCTAGCTTTAATTAATTAAGTCAGGCTAATATTTAAC
CAGTCTTAACTACTATTGCTCACCTTGCTTTTCTATCTCGTGTTCATTGGGCCTGTCTTAGCAAAAAATGACTATAGAG
GCAATCAAAATTTTTTATCTGATCATAAGTTCAAAGTTCAAGTCAGATAATTTACCTTAAATCTGGATTGAAAATTAAT
CATATCCCCAAAGTTTTGGCTTGAGTAACAGTCTAGATGTTTTTGTGTATTTCCTTAGATTCAATTCTATCAATCCTCT
CCTGTGACAYCTGTAACATTCCTATAGACGATTCCTGTTCAATGGTAACTCTTCACAGTGTGTCAGGAAGAGCTCTTAG
AGATACTATTAGTCAGATTATTCAAATAATTTCTTTATTGTATATTCCTATTTGGCACCAATTTGATAGTAGCATTTCC
TTGTGTGGATAGTTTCCCTTTATCTATTAAAAAAGCAGTCTTTTCTGACTATTTTCTATTTTCCCAGCCTCTACTCCCT
TGCTTGGAATTGACTGCTGTGTTAAGAGCTATACAGGTTTACAGAAACTGATCTTTATGATTCCCAAAACACTTGGCTT
TTGTGTGAAATTGCAAAAATTGAAATAGCCTCTTTGGTACTTGGTACTTATTCAAAATGTTCTCATGTGTCTTTTGGCT
GCATTGCATGTTGTGCACAGGTACCCTAGAACTTAAAGTATAATAAAAAAAAAAAGTTCTCGATTTTCCAACACTGATG
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GATCTTCAGAAGAAAGAAGCAACGCGAATCTCATACATATAATCTTTCCGTAGCTTCTACTGTAAATTTTGGTGAAGTG
AAACAATAAAATTTGTATAATGTAGAAATTAAGGGCTGATGACTGAATGGTCATTCACTTTAAATTCATGTATTTATTG
AAATTATTACTCGAGTTCTTGGCTAGGGATATAGAGGTGAACAAGGCCCAAACTTGAAGGAGTGAGTATTGCACTGGAG
AGAGAATCATGCTTACAAAATATTAGCAGGCCCATGTTCCTTAGTCTCTGAATTTGTAACAGAAAAACACAAATTCTTT
CCACCCTGAGTCACTCCTATCCATGAGGAATTGATTGATTTAACTGGCAAGTGGCAAGAATTTGACATCCCTTGGTTCA
AGCCTTCCAGTGGGGTAAAGGTGTGCTTAGAAGCCATGAGCACAGGGGATCTTGTTCTCTCATTTCTTATTCCCATCAC
CAGCTTTCCCCAGTAGACTGGATGGGTGAGAAGGAAGGCTCAATTAATTGCAGAACAATTGAGTAAGTGTCCTCCATGA
GCAGTTTCCTCCCAGCTGCTGATTCTCAGGACCAAGATGAGGGGAATAATTAGAAAGCCTGATCCTGGCTGCAGGTCTC
TGCCCTGATGCAGTGGTTGTTAAAGTACCAGTTAAGTACAGCTCAAGTTGTTCAACTCAGAAGGCACAATAAGCTTTAG

Fig. 9.167

CCTAATACTACAGTTCTATAGCTTTATGGATGGATACAGGGCAACGGACACAGCAGGTGAAGCATCTTAATGTCATCAG
ATGAGACAGAACCCACCCAGGTACACAGCTTCCATTGCTTCCTCACAGAGTGTGTGCGGCCACCATGGACAAGAACTAA
ACACCTGGGGGTCACTTTACCACAGAGACTCTGTCCTCAGTTTCCAACTAGTCTTTCAAAACTGTTCTGGTTTAGATGC
CCAGGTCTCTATGCTACCCTGCCAGCTCCCCACCCCATGTGCAGTGCCACCACCAACAAGGCAGACATGGCATGCTGTA
TTCTTCTTAACTCTGTAGCTTCTAAACTATGAGTGCTATGAGAAGGCAACTCTGAGATGGTTCTTCAGCGTAGGCCTGG
GTTAGCTCAGACCTGATGCTAACCCTTTACTTACAATGTCCAATCCAGATTTTTCAACAATAAAGATATTTTTATTTTT
ATTGGATGCTTTTGTATGCTTAACATTTTATCTCCAATGTATCACATGTGAAAGGCTCTGTGGAGTCAGTTACACTCCT
TTCTCTCTGGGGTAAGGACAGTTGAGATACATTGATTGCACCCAATTGACACGCAGAGACCAGTAGACATCAGACTTTT
TTCATCTTACTAATGAGGTAAATTAATTATGTCTTCCCGTGAAGAGGTCTAAAGTGATGCTCTAGTGCTATTACCAATC
CAAGAGTGGTATCAGAAGTCTCCTTTCAGAAATTGAGACAAAGAAAGAGGACACCTCTATTTTAAGAAAACAGGTATAA
TGCTGTAATATATCACTATCCACAGTGCAGTGGGATCCCAAGTGAAGGTGTGTCCAAGTGTGCCTGGAGGAGATCTGCT
TCTCATTGTAGTGAGAATTTGAGCTGGGATGATAAGGCTCTAGTGAGGTGAGCAGAGAGAGGGCATTGCATGTAAGGGC
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TCATACTTACATTATTAAATAAGTACTTGTCGTCATCCAAGTTAATTAATTGATTTATTTAGATTTTTGAAAGCCTTTG
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ACTCAACAAATATTTATTGAATGGCCACTGTGTGTCAGGCACTAGTCTTTCTATAAACATAAGGGATGCTGCAGTGAAC
AAGACCGGAAAGGTCCCTGCTCACAGAAGGGTTACATTCTAGAGCTTCACTAGCAGTACAGTGGTACAGTAACCACCAG
CATGTGTCGTGATGGAGCACTTGAAACGTGGCCAGTTCCAGTGGACATGTACTAGAAGAGCGACGTTCACATTGGATTT
CAAGGACTTTGTATATATATATACCCAATGTCAAAATATCTCATTAATATAATTTTTAATATTGCCATTACACATCAAAGT
GATCAGTTCGTTGCATTGTCCTTACGTAAAATACAATACACAACTAAAATGTGTTTTGTTTCTTTTACTTGTGGTCTCT
ATAAATAATTACATAGGTGGTCTTGCCTTTCTGCTGGACAGTGCTGCTCTTGAAAGAAGAGTCAAAAAATGAACTACTT
GACAAATAAATGAACAAGATGTTTTCCCACAGTGAGAACTGCTATGAAGACAGTAAAACTGGGTGATGCAATGGAGAGC
GACAGAGACTACGTTAAATCAACCAGCCAAAGGAGGCTTTTCTGAAATGCAATTTTGCTGACATGAGGATGATAGGCAG
GAGCCAGCCAGATGAATTTCTGTGGGAAGAGCAGCATTCTAGATAGAAAAATAGCAAAGGTCCCAAAGAATGGCTTGTT
ATCTTAAAAAAAAAAATGGAAGGGTTAAGTAGTAATAAGTCTGAAGGAGAGTTGTATGAGAGGAAATCAGAAAAGTAGGC
AGGGCTCAAGGAACTTGCAGACTTGGAGGTAAGATGGGATGTTTTTGAAGTGCAGCCAGAAACTACAGAAGAGTTCCTA
GCAGAATGACAAAACTGATTTACATTTTTAGAAAGACCTCTCTATCTGTTTCATGAGGTAGGAGCAGAAAAATGTGTAA
AGACTGTTCTAGTGTTGAATCGCAGACAAGGGTTCCAGAGGCTGCTTAAGGCTTTCAAATGGAGCCTCTGGGGGAAAGG
AGAGGCTGCCAAGCTGGTCGACTCCTCTCTTGGCTAAAGCTTTGCTGGGCAAGCTCTGTCCTTCCCTCCATTCTTGCAT
TCTGCAGGCAGTTGGAGATAAACTAAAAGCATCACTGTTAATGTTGTTTTTCAAAGAATGGAAAAAAAAAGAATGCATT
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GGAAGGCATTAAACAGGGGGCGAAAGGGACATGAGTTTGATTTTATTAGCCTTAGGTGAGAGATGAAACTCTTTTTAAA
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AGGATTTCAGCAGTCAGTCTAGCTGAGGAAAGCGTTTTCCATCCCTACTGCTTACCGGCCATTTTGGGGGACCATGATG
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AATGAGTTATCAGGGGCTGCATTGTTTTAGGCCACGTATAAAGCTGGATTGGACAGGTATGCAGAGTGGCTTCTACTCA
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CTACTCTTTCCCTCTCTACTCACTTTTTCTAAAAGCTAAGATATTACATTGGTTTAAAAAAGGGGAAGTTACATAAAAT
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ACACAAATCATTATATACAATTTGTGGGAAACWTTTAAAATTTATTTATAACGATTGGGAATATAAGAAATATGCAAAG
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CCAAAAAAAGGTAAAATCAGTGGTGTTAGGGCGTTAGCTGGTACCAGCTTGTAAGAGCCTATGGTTAACATATCTTCCT
AACTCCATGTTCAATAACATCATATTGAAATTGGCCACAGTGTGATTATTTACACCGTAGAAATTGGAAATGATACAAA
TCAGGGCTTTCTTCCTCCCCTCCTCTAGAGCCAATTGCTAACCATTTACTAGAACACCATGGGATAGAAATGATGAAGT
TAAAATTATTTGAAATGCACATGTGCTCAACAATATAGCAACTAAAACTATAAGACAAAAACTRTTAGAAATGTAAGGA
AACTTTATTTAAAACACATGATTATACTGGCATATTTTAGTTTATTTCTTCAGAATTGTACACATCCAAAAACTATTAA
GTAACAATATAAATAAATTAGATGTAATCCATAAACTTAGTAAATGAAATAGACAGTCTTTATTYATTCAATGTAAGTG
TGTAAATGGATGTCTCCACCTTAAAAATGAGATATTTTAAATAAGCCATAATTGATTCAAAATGGAGTTACCTTTTTTG
GCATCACTAACTTAGCGRGTAATCTTGTAATCTTCCTCTTAAAATTTGTTTTTGTGAAATCCTAATTTTCTATTTCTTT
TTCTTTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGCTGTTGAGACAGAATCTTGCTCTGTCACTGAGGCT
GGAGTGCAGTGGCACGATCAATGCTCACTGCAATCTCCGCCTCCTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCAA
GTAGCTGGGACTACAGGTGCCCGCCACCACTCCCAGCTAGTTTTTGTTATTTTTAGTGGAGATGGGGTTTCACCATGTT
GGCCAGGATTGTCTCAAACTCCTGATCTCAAGTGATCTGCCCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGTGTGA
GCCAATGTGCCTGGCCCTAATTTTCATTTATTATACTTCCCTTACTATAGATTCAATACAAGGGAATGAAAGCTTAGAC

Fig. 9.168

GTTCTTGGCATATTTTATGAACTCCTATAAACCCCAACCAGGTTGTGAGTAGTTATCGCTTACTGAGACCTTAAACACA
AACAATATTTTAATGTTCATTTATTATCCTGAATAAGATACATAGATATATATTGGGAGTTGAGCGCTACCATGTCAAG
AGGAGCAAGCCCATAGAATGATTTTTCTTTCATTTTTTTGCAAAACAACTGCAATGTCCCATTAAGACTTTTCCTGCAT
GTTCGTGTCAGATGAAGGAAAGTATTTTCCACTGATACCCCAGGTTGTTAGCTAGTCCCACGACTGCTCTTCAAGAAAC
ACAAGAGACCTATCTGAATGTGGGTAAAAGGATTTCATGTTGCTTTTTACTTAGAAACCCAGATTGTTTGTAATAAGCT
CTGTCTGATTCCTTCAACACTTAGCATCCAGGCAGTTTTCTTCCTCTAAACTTCAAAAAATAGGAGAGAATTGTAAGGA
AAATGATAAAAGCATCTGAAGTTCAGCAAAAGTGAGCCTCATCTGAGCTGACTTGTCCTGATTTGGGGATAGCCTGAGG
AGAGTGTGTTCACGCACCTTGCAGAGTAGCCCTTAGCAGCCACTTGAATAAAAACGAATGAAAAGATAAACAACAGGAG
TGGGCAGAAGTTCGAAATGGAGGATGTGTGTGAAGAAATAATAACATTGTCTTGAAGATTTTAGAAAATGGGAGAGGCA
AGAAAAAGAAACATAGAGATGAATCCTGGAAAAGGTATTTAAATCTTGGTTGATTGTTCATAAAGCCCCCACCCATAGC
ATCTTCATCATCCCTGTGGGATGCAAATATTGTTGTTTTCATCTTACACACACGGACATTGTGTTTCTGACAGGCCAAG
GGGCTGTTCAAGGTCAAATGACTGTTGAAGGCAAAACCACTAGTATGCAGCAGTAGCAGAAAATGAATGCATGGCTTCT
GATGATAAATCCTATGGTCTTTTCAAAACGCCTCTGTTGTCTCTAGGGAAATTGCCTCAAATTAGAAATCAACACATTC
TACTGCAGTTCTAATTTGCACACGCTTGCCTGAAAACTTTCTAATTTCTGGTTCTTTTTTACCACCTCCTCTCCCACTT
AATTTCATAGCTACAGAGGGGAAAGATAGCTACTGTCCAAATAGTCTTGCTAAAGGACCTCATTTTCAAAATTCTTTTT
CCCCCTTCAAGTCTTCATTTGACTCACGGTGTAATCACATTAGTGAGGAAGATTTTGTACAGTCATACCTAGTGCCAAA
TATCAAGTTTTCCTCCAAAAAGCAAAATAAAATGATGGGCAGACCACCTGCTTTCCATAAAATTGTACCAAAATCAAGG
AGGACAACTCTACGTTATCACGTAGAAATAACATCAGCATTTATGAGTAATAGGTCTGTTTGATGGGCAATGCTGTGGT
GTGTAAAATTCTGATGACAACATGTTGAAAAAAATGTCTGGAAGAATGGGAGAAAAAAAGTGAAAGTCTATGGAAAGTA
GTAGATTTGGAGTCCTTTTGAAGAAAACATGCAAGAAGCTGCCAGATAACTGCTAGATAAGCAGCTATTGACCATTTAT
GAACTCAGTTTTACCAGGCGTTGAGAAGGCGAGAATACTCAAAATAAAACCTGCATAGATTCCACCCTTAGGAAACTTA
CAGTCTGGCAGATTCAAAACAATTTCACTTCACTTTAAGTAATTGTAAAATTGCCTCCATAAAAGCATAGCCTGGATGA
AAACATTTTTCAATATTATTTACTCATTTTAATGCACTCAAATAAACTTTATACCAAGTAACTTCTTTAAAGATCTACC
AATATAAGGCACGTATAGATCAAAGTAGACAATGTCAGCCCATATAATCCCCTTCTCCAGGTCCATTTTGATTGCTTGT
GTCAACATTGGAGACCACAGTAAATTACTAATGGTCCTTAAAATTCCCCCCCTATTTATCTCTTTCTTTTCAATTTTTC
TCCTTCACTCCTGCTACTCTATTTCTTGTGTTTTTTTTTTATCTACTTTTTTTTTTTGCTCTTCCCCAGGGAAACTAGA
GGAAAATTCTTCATCCTGATAAGAGTTTTTGGCACCAGAAAGGATATTTTACCTGTAGTCTGACCTACATGGAGTGAGG
GAGCCTGAACATGTTTCCATGAGTGTTCTAGTTCAATGGCAGAAAGATCCATCAGGAGAAAGCCTTTGTCACTGATGG
CTTTGAAATTGTTCAAATGACTTTGCAGTTCACAACACGTGAGCTTAATCATTGGTTTGGCTCTTCTGAGGAGCTGAGG
GAGACAAAGAAGCAAAGTTATTTTCCCAGAGGTAGTGAGGCCCAAGATGCTCAGAAAAGATTTAATTGAAAGATGCCAT
TGCTGAAATTTCTTTTATAATGTTCTGCCTGTGGCTTTCCAATAGTAATAGTAGTAGCAGTTGTTGTAATAATAGAGAT
AGTAGTTGTATTGATAGCAATAATAATAGCTACTATTTATTGAGCACTGACTGTGTTTCAGGCATGGGTCCATGCACTT
TACATATATTAACTCATTTAAACCTCCCAACAACCTAACAAGGTAAAGATGATTATTATCCCATTTCACAACTGAGCAA
ACTGGGACATGAGATTTAAGGAACGTGCCCAAGCTCACACAGCTAGGCGATCACCAATTATACATTTCCTCTCTGCAAG
AGAACAGTCTATTTTTCAAAAACATGCTGATAAAACAGCAATCCCATTTGCTTCTAAGGACAAACCCTGCCATGCCTGA
GTGTTGCCATTCTTAAACTCCAGGCCAGGGCTTGCCTTTGGATGCATGTGAGCTTCACTGGGCTCTCTGCTCAATGTCC
CTCCTCAGAGTGTCTCCCTAACCACCTCTCTTGATCTCTCTCCACCCCTTTATTCCACTTGGGTTTTCTTCAGCACACT
TAGGGCTACCTGACAGTGTTAGCAAGGCTACAAAGCAAAACACCAGATGGGGTGGCTTAAATAACAATCATTTATTTTC
TCACAGTTCTGGAGGCTGGAAGCTTGAGATCAGTGTGCCAGCTTGGTTCAGTGCTGGTTATGGGTCTCTTCTTGGCCTG
CAGACACAGACACCTTTTCACTATGTCCTCACATGGCCTTTCTGTGTGTGTGGGGGGGGGGGGGTGTGGGTGTGTGCGC
GCGCGCGCGTGCCTGCATGCCTGTGTAGGGAGAAAGAGAAAGCTCTTTGCCTCTTCTTATAAGGTCAGATTAGGACCCT
ACCCTTATGACCACATTTAAACTTATTTACTGACTAAAAGCCCTATCTTCAGATATAGTGACATTGAGAGTTCAACATA
TGAACATATGAGCTGATAGGAATATATGAATTGATGGGAACATATCAACACTTCAACATATGAATTGGGGTGAGGGACG
CAATACAGTCCATAGCGGTGACCCAGCATATATTTAATAGGTCATTAATGTGTTTACTATGTGTCTTTCCCACTCCTCC
CGGTATTAGTAATCTAAATACCAGTAAGGATTTGAGGTTCTTCTTTGTTGTATTCCTAATACCTAAGACACTGTCCCAC
ACATGGTAGATGTTCAATACATATTTGTTGGATAAATAAAAAATACAGAGCTCCCTCTTCTCCCCTACATGTTGGAAAA
TGTGTGTGATCTAAATGAGGGAGAGGGAGAACCATCTCATCTAATCTTCCAAACTTCCTGAGCCACCTTTAGCTACTGA
GCACATTCACGTTTCCGTCAGCTGGGAATTTAGGTGCCCTGCCTATCATCCTCTGGAGCCCATCCCAGGAGGGGGCAGA
AGGAGGTGGAGCAGCACACTAGTGTTCCCAGAGTGGGGAGAGCAGATGGAGAGGAGTTCATGGGAACGATGATTTACCC
CTGCTCACTTACCCCTGTGAGAGGACACTGCCCTCCACGAATCAATGCTGGCTCCTCCTCCAGGAACCAGGCTTCTGCA
TCTCACTTGCCATGCTGTGGATCTAGGAACAAATTTGCATTTGGAAATTCATTTTAAAGTGTGCATGCTGAGGTTCTGG
TGACATGCAGGGTAACTTCTCCCACCCACGATATCTCTTGACTCAGGCCTTCATGTAGGAGGGGAGGAGTGTTTGGCAG
CAAAACTGGGTATTTCTTAGGAAGGAAATCCTTCTAAGCTTTATGGAAATCCTAGGGTGTTGTCCCTACCTTTCTGAGT
GTGGAGCAGACTATCTGTGTACATAGCGGTAGTGAGGGGTGTAATATTGGAGAATGGCTTAGGTAACAGCCAAAATATA
CATTGTATATCCCCAAAAAGACGACCAAAGACTCACAGGGCCATGCTGCTATCATTAGATATAATAGGCAWAGCCTTTC
ATTGATATGTAAATGTTAGTATTTTTGGTAAGTGCCTTATTTTATCTTCTGGATAATATAAGATCAAAGTACCATGAGG
GCAGGATCCTTCTCTCATTCATTTTTTTTCCCAAGAGCATAGCACAAAGTAGGAAGTACTTGTTGAGTGAATGAATGAT
CCTAAATATGAAAGGATGGCATTTTATCGCCATTTTCCAGATGAGAAAAAAACGAGGGAGCTTATCAGGTTTATATATA
GTGAGTGACAAACTTCAGAATTAAACCAAAATCTAGTGATTCCTATAACTTACAGGTTATTAAGGAGTCCACCTGAATG
TAAGTCCAACAAGACAGGTGTTTATTTTGTTTACATACATTCCAAGTACCTAAGACAATGCCTAACATATATAAAATAC
TTCATAAACATCTTCATGTGTGAATAGAATTTTCAAAGTTCATCTCAATATATGCCTCATGTGACACTTCCAACCCTTC

Fig. 9.169

ACTGCCAGGTCTTTCAGTCTTTATTTGAATAGGTTCAGTAAGAAAGAATTCACTCGTGCTTTAGATATGTATGGCTTTT
CCACATTGTTGTCAGTTCTAAATCCCGAAAGTTATTTTTGTATGCTTGGAATACTTCACAATATTCACAATTTTTACAA
TAAAATAATTTCAGGTCTTCTTGATGAAAAATGTCGATCAGGACAGGGCTGAGGATAATCACAAGGCTTGAAATTAAAG
AAGTCTCCTTAGGCTGAAATGAATTTCTAGTTGTAAAACCAAATATGAATCTATGTATTTGTGTTCCTCAGACCACTTT
TCCAGCAGGTCCTTGGCTGTATTTTGTATGCATTTGTGAAATGCTTTGTTGAAATTCAGTTTCAGCCAGGTCTGTAGCA
TTCTCCTGGCCCCTGGTCTGATAGTTGTACCAGGAACACTAGCTAACAATTGCATGGCACTAGTCTCAGCTGGATTTGT
TCTAACTCTTTTATATGTATTAACTCAATCCCTACAACCACCCCATTTCATTACTATGCCCACTTGAGAACTRAAAACA
CTGAGGAAGAGCGAAGTTAAGTAACTTGCAGAGGTCTCAGAGCTAGGAAGTAAGACAGCCAACTCGGAACCCAGCAGAC
TAGCTCTGGAGCCTACCCACCTACCCTCCACACCGTACCTGTGGTCCATCCTCACCAACCAGGCCTGCTGCCCTGAGCA
TAACTTCACCCTCTTGCGTTCTAAAACTATCTGCTGATTAAGTGAGTTCTGAAATGTTTTCAGGGACCAATACTAAAAT
CAACTATGAAATAGTTTCAGAGATTGACCTTTCCTCCTTTTGGAATGGATAAGATTTTCCCAACCGAGGTCTCCCATCA
GCTCTCCTGTTCCCCTGGACTGTGGCACATAGGAGGGCCAGGGACTTGCGCCTATTATTTCATTTCTTTTGTTATCCTT
CATTTCTAGATCTCTTCTCTACCACAATTATCTCTCATGTTGACAGTTTCCCCACAGATGGGATGTCTATTTCCTTGAT
AATACAGCATTATTATGCTAAAATCTCTCATTTGTGTTATTAGCCAGACTCTGTGCAAAAACGTGTGTATATCTGAGAC
TCTGTGCTGTTCTTAGCCACCTTCTTGGTCCCTTCTCATGTAAATTACTAGGGCACTTCTTCAATATTATTATTATCAT
GCCCCCTTACCACCACCACAAAATCTTCCATCATAACCCATTTTTTTTTCCTCCTCCTTACCACATTTTCAGCTTTGAA
CTCTTATAATCAGATCAGGAATTACATTTCTGAACAATGCAGGCTTTGCAGCATTGTGAAGTGCAGCTGGTCCCCAGC
AGAGAGCCCTAAGCCCCTGCCTGAAGCCAAACCCCCTTTTGTGGCGAGAGGTCTGGATTTTATTTGTTGTTTTTATCTT
TGGTGAACTGTCAACTGGAAGCAGAGATGCGAACACCAGTTATGTCCTCCCCTGCAAGGTTCATGACCAATACTTTATA
GTTTCTGGATATGCTTCCTAGGTTTCTTCTGTTGGTGTCATTTGCCTGCATGTGACTCACTGGCAGGTGGTGATTTCAT
CATATTCTAGACATGTGTCTTAGGAAGCTGGCCCCTATCCTGGCTGGCTGGACACATATCGAAGTTCCTTAGATCTACC
ATTGTCACTTTCATATCCATTGTTAAATACTATAGATAGCATGCAGGGGTCAGCCAAATTGTTCTGTAAAAGGCTCAAG
CATAAATATTTTAAGTTTTGTGGGACAGACAGTCTCTGTCGCAACTACTTGACTGATGCAGCATGCAAGCAGCCACAGA
CAATAAGTAAACAAATGGGAATGGTTGTGTCCCAATAAAGCTTTATTTATAAAAACTGTCTTTTTTTATAAATAAAGGA
GCCCATCGTTTGCCGCCCCCTAGTGCCAGGAAGGAACAAGGGGAAAATAAGGAAGAGACCCAGAGGAAAAAAAGTGTCA
CCAACCATATCTCTAACTCATATTTATTTACTTATTTTTCTAAGCGCAATCGCTAAATTATCTCGTCTTCCTAAGGCGT
ATGAATCTCTTACATTAACTTAGGGACAGAATATAGAGTTTTATGTTATCTTCTGTGAGTTCTTTTTCCATTCTGTCAT
GTTTCAGACTTTCAGAGGTAATTTTTAAGTATTTCAGCTGTGCCTTAGATACATTAAGGGACCTATAGTGCCTCCCTGA
GGCCAAGATGATGGTTGCAATCATAAATAGGTTATTTCTGAGTTGAGACTGGTAAGAACAGATTATCCTGCCCAGACAG
TGATGTGCCAAGCATTGGCAACTTTGAAAAATTTGCAATTTGATTTTATAGGAGAGTTTCCTTAACAGGCCTGAGTTTT
TTTCCCATTGCTTTTGTGAATACAGTATTTTCCCCTGCTAGACTCTTAGTCAAATGTTCTTGCCATTATAAGAAAAAAG
GAAAACTGAAAAACTTGAAAATAATTTTATTGGCTTAGGAATTATTTTCATGTTTGTCTGCTAATGGCAAATAAATCTA
CCTTATTGAATCATACGGATTTTAATTCCCCGGGGGAAAGGTAACCAATGACAGGCATATGTGTGTGTGTGTGTGTGTG
TGTGTGTGTGTACAAGTGTATGCTTGTGAAAATTGAACAGCAAAAAGAAATTAGGTGGAGAGGAAAACATTAAAGCTGG
TACTGGTGGGTAATCATTATATATAGTATATATACACATATGCCTTCTCCAGTTTTATGGAGGCAGTCAGTGCCTCAAA
GACGTGTAATAAAGAGACAGCAACAATTATTGGTGGCATTCATGTAGGAGAGGCTTGAGCCAATGTAAACTTGACTTGG
TTAGTAATCTTTGCCAAAACTCCCTGATTGTYGTAAGGGAGTTGTGAACCATTAGGTTTGCTTAACCAGAACAGCAAGT
AAGCATCCAAACAGATTGTCCTTGGACCATAAGCAAATGCCCAGAAAATAGCCCCCTGCATAGGAKATTAAGTACTTAG
AAACAAATGAGAAAAAAATATTACAGCAAGTCTTCCAGGTATAGAAGGGATAAACAACCCTATTGGTATCAGAATTTAGG
AATATTATTATGTCTCCCACTTTAAATGAAATACAGCAGCCTGACTTGGCAAAATTTGGGGAACGGTTCCCCTTCTTTG
CAGCCAGGTTCGGTGCTTGCCCTCTGGCATCCCTTCAATTGTGTATATTACTGGCAGAGACAGCTGTTTGAGCTGCTAA
TAAGATTGCAAAATAATATCAGCTTGTGCTTCAGGTTGAAGATAAGAGATAACATTGCATTGGCTGTAGGAATGGCTTT
CTTATAAACTGGATTTAGTTTTATCTCACTTGTCTCACTTGTTACTTTTTTATTTATTTACTTTTTTTTTTTTGAGATG
GAGTCTCACTTTGTCACCTGGGCTGGAGTACAGTGACACGATCTTGGCTCACTGCAACGTCCGCCTCCCAGGTTCAAGC
CATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGGCATGCGCCACCACGCCTGGCTAATTTCTGTATTTTTAG
TAGAGACAGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCTCAGGTGATCCGTCTGCCTCGGCCTCCCA
AAGTGCTGGGATTTCAGATTACAGGTGCCATGACGCCTGGCCCCACTTGATACATTTGAGGGTCTCATAAGGTCTTGAA
ATTGAGCCTGTGAATTTATAAACAGGGCTACAACCATCCTGCAGATGCAACTTTTTGGCATGCCAGAATCAGTGGCACC
TGAAGAGCATCTCCTTGAAAGCGGTAGTAGATAAAGGAGATGCCTTTCAGGTTTCAGACGTGGACCTCAGATTCACCT
CCAAGACTAGAGTTATCACAGTGCACAGGATCATCCAAGAACAGACATGCAGAGGGAGGAAAGGCCATTGTAAGGCTCA
GGAGAACATAGTAGAGCCTAAAAATGAGAACAAAATGGTACTATCAGAAAAGATGGCAGTGGTTGGACATAAGAGAGG
GTAGGTTCACAGGTTTGTGGGACCAGGACTCAGTCACTTTCCTCGCGCTAGGCTCAACCCTCACGATGGGAAAGTAAT
GTACTTCTGGGCTTAAAATTCTTCACAGTCAACTGGTAGAGATATGAGGGAATTTATTGCTAAGTAGTAGGGAAAGTGT
TTTCACAAATAACATACAGGAAATTCCCATATCATACAAAGGAGGTTGTATTATCACCACGTTTTTACATATGAGAAAA
TAGAGTCTTAGAAAAGTTATGTACCTTGCCTAGGAGCATGTGCCTAGATAGTGGCAGCTCCAAGATTCAAACCTAAAAC
TCCAGAGTCTGAAACTCACACAGTTTCTTCTCTGTTCTGAGGCTTCATGCAGCTGGACAGGAGGTTAGCCTGAGACAAG
AGGAGGATCATTCTCGAAGGCAGAGAGGCTGGGGACATGACTGCTTTCTGGAAACCTGAGCTCATGGAGAGAGGCTGAG
AGTCAGGAAAGTAGGACATGAAATCATTTAATGAGAGTGAAGACCAGCCAGGTCAGGGAGTTTGAAAAGAGAGTTTTGA
AATATCCATTGTAGCTAATATGGGAGAGCATTCTTTGAGAGTGATTAAAATGGCGACTGAGGACACAGCTAAAGTGAGA
AAGAATAAATCTGTGGCAGACTTGCATATTTTTGGTATGTGCATCTCTTTCCGAAATCAATTGAACAGAGGTGGGAAAA
GTAGCTTGGTGGATAATGAGGTAGAGTGGAAAGTTGAAAAGACAGAGCTTAGGAGTCTTTCTGATTGGTCTAAAATTCC

Fig. 9.170

CCAGGGAAAATCATGTTTCTTTTTATGAATATAGTCCAGGTCTTAGGTCTGTCCCACGGCACAAAGTTTTCAGGACATT
CTGGACAAATTCACACATTTCCCTGGATGTCAGTCAATTCCCTTTGCCTCTGTGCTATCACTTTCCTTCTCTCTGCTTT
CTCCTTGAGTTACCTGTCCCAGCTCTTCACTCCACATTCTGCAGCCTCCGTTTAGCTCCTTTATACCTTTGTCCAGATT
CTTCCTAACTTATTATACTGCCTCCTCATGTCAACTTCCATCCCATCTGCATTTGGGAAAAGAAGCCCACATGATAAGT
GAGTCCATCTGCTAAATGTATGCATCTTAGAGCATTTGTTCAAGATCAATAAAGATACAAATTATTTTGATTTTTCAGC
TGTTGCCCAAATCCACAAGAGTACACAAATGAAAATGCACTGATTTTTAAAAAGTACAAATAGCCATTAAAGTTTGTAT
TGTTTTATTCTTTAAATAAGCCGGAAAAAATGGGAATACGTAGGAACGAGGGAGCTAGCAAAATAGGCGGGGCTTCTGCG
TTTCAGGTGGTCTGAGACTGCAGTGACCCTGAGGCTGGTGGACCTGGAAGGAGCCAGGGAGAGATGGTGGATCCCAGGG
GTGGGAGCAAATGCATGGTCCAAGGTTCTGAATGGCAGAGCTAGACCAAAGGACTAACCTGCTAACCTTGACCAAGGAG
ATGGCCCAGAGGTTTTCTATTTCTACTGCTCCATCTTTTCATTATAAGTTCCCAGTAGAAACGAGTCATCATTTAAAAT
ATCGGTGCAGCACTTAACACATAAGGAAAAATCAATAACATTCATTTACTTACAGTACCCAGAGAAGAAATAAATTCAA
ATACGTAAAAATGGGCATGAACCATYCTGTTCCATATCCCACTTTAGGACTGTCAGCAACTGTATACATTGCTGAACGT
CATTGCTCTTGTACATAATGAATAATTTTCTGTAACCCTGTGAAGGCCGACTGATTTTTACGGAAAGACAGCTTTGTGT
TAGGCGGCCCGCCTTCCCCACGGAATCGGGTTTTCCCACGCCACGTTTTGATGTTTCTGAGAAGTGTGCGCCATCTGCT
GGCCGCTGAGAGGATTGACGAGCAGCCATAAGGAGCACCGTGTTTCTTGAGCATGACTTAACCAGGCAATGGAATTACA
ATTATCTTTGGGTTTCTAAAACATAATAGACATTTCAGGATTCACGTGACTTATGAGAAGTCGCTTAATTGCCTTTCAA
GCAGTATACATTTTTTATTCAATATGTGTATTATTCTTTGTAATAATAAACRATGCAATAAAGCAATCGAGGGGTTCCC
ACATGCTCTCTAGGCAGAGATGGACCCCGGGCCCTAGATGAAAGGTTAATAGTTTGGAGTGAGCACTAACTCTGGTYCT
CTGACTCTGAATCTAAGTCAGGAGTAGAATAGAGCTGTACAAAGAAGACTGCTTGATGGAATTGAATTTTGTCCCTTCT
TCAATGGGGGAAAATAAAGTACAGTTTTCATCAATAGATTAATGACTAAACTTGGACCTTGATGCCAAATCCAACTTGA
GCTCCGCCTGCACAGTCTGGAGATGTACATAAGAGACACATGCTCAGCCTCTTAGCACATCGTTATAATCCAGGCAGGC
AATACTATATCCTAAAATTACTCCTCTTTGCTGAAATTGAGAAAATAGGAATTACCCAGGGGTAAATTTGGTACATAAA
TGTACCAAATGGTATGATTTATTCTAGTACTGTCTTCTTTTTCTTGATTTTCTTCTTTATTGGGAAATTTGTATTTTGT
AGTTCCTTCGACACTTTAAAAATTAAACTAGAGGGTAAGATTTAAGTTTTCTCACAACTAACAAATGATTTTGATTTTA
TTGCCCAAAGCCCTTTATATCTCACTTTCGATGGGTCTAGTCCCTTTGGCTTAATTTAGATGTGATTTTTCCTTAATAA
TTTTGAAAATGGTGGTGCTCTATACCAACTAGCTAGAATAGGAATCACATTGACAGTATTTAATGGATAGAAGCATCTC
AAAGATCTTTGCTTAATGAGGGCAAATCATTAGCAATGTCCAACTCCCTATGTTAGAGGCGCCAACTAAGGCACGGTAC
TTAAATTTAAAGCACAACTCTTCGACTTCCATAAAGTACATATATTACATTATATTTTTAAATTACGGGGTAGTGACTC
GATATGTCACTGGAATGTTTTGAATAGTGCCCCCGGCCCCCCTGCCAAAAAAAAGAATGCAAGAACACTGTCCTAACCA
AGAAGGCCTGGGAGTTTTAACTAATTCAGCCTTTCAGCCTCCACTTAAAATTCTGGAAGACAGTAGTGTTGGTGCTAGC
TGTCCTTGGCTGCAAGTTGTCTTTACAGAAGAACTTGGGGTACATTTTGGTGTGAGGCCACTCTTGCAAGCAGCATTTG
CAGGCATTAAGAGAATGCACACAGTTCAATAAGCTGGGGTTATATTCATAATCAGTCTTTGTTTAATGCTGTAAAAATA
CTAAAGGAATGGCCAAAATCTCTCGGTATCTGGGGAAAAGGGTTCTTTGAAACTTTTGATGTGTGAGCAGAATAATGGA
AACTTATCTGTTCCCCATGCTTTTAACACACACACAAACACACACACACACACACACAAACGTCATAGATCAAGATGTA
ACAGGTTGGAATGGGGCCTAGGCTTGGGAATTTTGTGACTCCCCAGGTGATCTCAATGTACTGCTGGTTTATTAGCAGG
CTTTGCCCAAACAAATACTCTTTCTCACCTACCAGGAGAAATCAAAGAGCTCTGGGTTAAACACTTGTATGTTAAAACC
AAAATGGTGGGCATTGCAGAGTAGAGGAATTAGGAGAAGAAAATAGATATTGGGTCAAAAATTGGCCTCAGGAACCAGG
AAGTAAGAATGGCCAATCTTAAAAGAGAAAGTTCTGTTGAAGAGGGAGCATTATCTGAAGTTGGAATGACTATGGAGGA
CAATGACAGCTGTCCCACAGGATGTCACTGGGCTGAGGAAAATCAGACTGGAAGCCACAAGCCCATGGGGGCTCAGGAA
GCCTGTTTCCTGAGCAGAACAGAGCTGGGTTTGGCACATGCCTAGTGTTCCAGTGAAATCTGTCATTTTTCTGCTTCCA
CTTTTTACAAATGAGTTATTCAACGCTACTTTGTTGACACATGGACTCAGCATTTAAAAAATGACAGTGGAGATAAGGG
TCTAAGGTAGTGATAGGCAAATGAATGATGGGCATCCATCATCTGAAGAGCTTCTTAAAATTCAGATTTCCCAACCCCA
CCACAGACGTCTGTCTCCGTAGGTCTTGGGTAGGGCTCAGAGCAGGCTGCTTCTGAAATTTTGAGGTTGTGAGGTAAGA
ATACAGGTGGGAGCCTGCATACCACTTGTCTAAATATTTAAAAGTTGTAAATCAGCCTAATGAACTGTGAAGGAAGCTC
TGGCCTACTTCCTTGACAACTTAAGCCTATACAGAGACCTGGAAGATCAAGTTCAAATGCAGAACCTGAATGTTTCGGT
TCTATCTGCTCCCTCAGTGTTAAAGGTCTGTCCTTTTTCCTTGACAAATATGCTTTCATAATTGTCTGGAAGGCCGGAT
TCCAATTCAGCAATTCCAATCCCTCAGTGTTGAGGGAAAGGGCCACCCGCTCTGCTCTTCTCTTCCCATCTGGCTCTGT
CTGGAACCACGAAGCACCTCTGTGTGTGTGTGGGGACAAGCCAGCCCAGGTGCCTGCGTTTGGCCCAGTACCTCCTAC
CCTCATACTACATATGTAGCCACCCCCAGGCATAGGGTTGTGCACACTGGTGACATGTCTGCCCTCTAGAAGAAGCATG
GGGGAAATGGGACCCCACAGGCCCTGTTAGCTGATACGGGCCATGAGCTCCCAGGTCACGGTCTAAAAGTACATTGGTT
TGGGGCTCTGCGTGACCATATTCCAAGGATCCTGCAAAGGAAGAGGCAGGACTGGAGAAGGGAAAGAGTGGGCCTTCTA
AGGCTCCCAGGGCAGGACCTCTTTTTGTCTGGTCTAAGAGGGGTATTGAACCCAAGTGGCTTAGATGCTGAATCCCTGG
GCTTAGAACCCAATGCCCTGGAGCATTGATCTCACAGTGCTGGCCAGAAAGGGGCTCGTTGGTTGCTACTAGGTCATTA
TCACTCCCAGGGCACCTGGGCAGTCAATGAAACTGAGCTCAGAAAAGTCCTGCCTTTATGATGTCCCTTCCACTTCCAT
AACTTTCTCCATAAAATAAAACCAAGAAAAAATAATTTTTCTCTTGATYTCAAATCGTATTTAAAGGAAAATAGAAATTT
TATTTTTAAAGAAATTGCATGTTTTCATTGTCTATATATTGTTTTGAAATATGTACACGTTGTGTAATGGCTAAATTGA
GCTAATTAAATGTATAACCTCACATGCTTATCATTTTTGTGGTGAAAACACTTAAAATCCACTCTCTTAACAATTTTCA
AAAATATTTGAAAAAATATAGTTATTAACTGTAGTCCTGTAACTATTTCCTATTAATTATAGGGAAGTAGAAATTTTAA
TAGTCATCTTTCTCATGCTTTTCTTGACTTTTAGATTCAAGAAATAATAAACTTGAATAAAAGAGATTAATTTCACAGT
AATGCAATATTTCTGTAAAATTTCACACCTTGTTGACTGTCAATCAGCTGAGAACTTTACACCTCATTAAAAATCCATT
AGAACAATGGCTGTTCCATTAGCCCTTCAGTTTATGCCTTAAAACATACTTGTCTAAAARCAACATTGTTTTTGGCAGG

Fig. 9.171

CTGCTCCTTTTGATAAGTGGGGACTTGCTCTGGTATTAACTGTTTCCAGGTCTCCAGAAAAAGGCTCAGGGTATGTCTA
GGGACATCAGTGACAACAGTGAGGTAGAGCAAGTCAATACTGTGCCACCTCTGCGCTAGCCAGAGAACCTCTGCTCCAA
GGTGAGTTGGTTCCCCCTTTCATTAAGGTCCTCAGGCCCCAGTAAAATCCAGATATGGCTTTGGAGAGGAACGCTGTCT
GAGTGAAGCTCCCTCAGTTTCATAACCAGCTTAGAGCTTCTCAGCTCTGACCTGCCTGTTAGCATGGCTGGGGAGCCCA
GTGGTTTATTGAACTGGCTAATAACAAAGATTCTGAGATAACGAAACAGAAAACAGGTAGGTTTGATGAAAAGGAAGG
AGATAAGGAGGATAAGAGGGGTAGTAGGGAGGAATAGTGGGAGAGGGGCAAAGAAGCATTAAATCAAGATTTGGAGAAT
GGCTGGAAACAGTGGCAGAGACTCAATAGGAGAGTGACCCTGACAGACGGGGAGGTGGCAAAAGTGCTTGCAGGCACAG
GCCACCCAACAGTTATTTCRGGGACTGTTCACAATCTCATCTACTTCACAGTTTTGCCTTGTCCTAACTCAGGTCTTAT
TAGAGCCAGAATAAATTGCCTTGCATCGTCAGAAACTGACCATTCATTCCTGTGGTCTTCTTTGAGATTTTTAGAATCC
CAAGGACTAAATATCCCTATCCACTTGCCTTTGTTCACTGTATTGGATGATGTGCCATTGCCTGTCTCCAGCATTCACT
GAGAGCAGTACCCCAACATCCAACACATCTTTAAATGCCAAAGGGAAGTGAAAATGTCCTGACTTCTTAAACTCTAACA
TAGCATTCATCCTATTCTTATATTTTTTGAACTTTGCATCAAAACATACATAAATGCAGGTGCACAAATTGTAAGTGTA
AAAGTCAATGAATTTTCACTAAGTGAACACACTTGGCTCACCAGAAGCTAAAGAAAGGGTGAACTAGAAGGGGACTTTG
TAGATTACACTTCCTGACACCATCATTATTTAAGAAAGAACTGTTTCCTAGGTATATTTTAGGACCTTTTATCTGGTGA
TATCTATCTACTAACTTTAGGGGTGGGGTGGAATTGATTCTTTTTACAAGATTAGTGAAGCTAGAAACAACTAGCTTTT
AATTCATTAAATGTAACCTACTTTCAAGTAGCTTCATGTGACTGAAATCAATCTGTTTTATTTTCCAAACCAGTGGAAT
ACACACAGGGTCATTACATACATTTTGAAAGTCTTCTGTTTCAAATGTATTGTAGATTAAGAAACAGAATGTGGCAGGG
CACGGTGGCTCATGCCTGTAATCTCAGCACTTTGGGAGACCGAGGCGGGTGGATCACTTGAGGTCAGGAATTTGAGATC
AGCCTGGCCAACATGGTGAAACCCCGTCTCTACTAAAAATACAAAAAATTAGCCAGGCATGGTGGTGTGCGCCTGTAGT
CCCAGCTACTTGGGAAGCTGAGGTGGGAGAATCGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCTGAGATCATGTCA
TTGCACTCCAGCCTGGGTGACAGAGCGAGATTTTGTCTCAAAAGAAAAAACAAAAAATAGAAAAAGAAACAACGCTATT
GGCACACCCAGAATAATCACTATTGGACTTCTGATACCAAAAACAAGGGGGATTTCCTCGTTTTTAAGTTTTATGAAAT
GAAGTAATATTCTGTATACTCTTCCGAGTTTAGCTTCTTTGAGTAGGTTTGTGAGATTTATCCAAGTGTGGAATGGAGT
TATAATTTATTCATTTTTGGTTTTGGGTGATTGTATTTTTAAAATTAAGGTAAACATTAAAAGTTAGGGTTTAACCCAC
TACTGGGTATTCACCCAAAGGGAAAGAAGTCATTCTACGAGAAAGACCACATGCACAGGCCTGTCCAATTCACAGTTGC
AAAAATAGGCAACCAAACTTGTTGCCCATCGACCAACGAGTGGATAAAGAAAATGTGGTATATATGCCCTATGGATTAC
TACTCAGTCATAAAAAGAAACCAAATAATGTCTCTGGCAGCAACTTGGCTGGAAGTGGAGGCCATTTATTCTAAGAGAC
GTAACTCAGGAATGGAAAACCAAATATCATGTTTTCACTTACAAGTGGGAGCTAAGCGCTGAGGATACAAAGGCATAAG
AATGAATAATGGACTTTGGGGATGGGGGAGAGATTGGGAGAAGTTGAGAAATAAAAGACTACATATTGGGTACAGTGTA
CACTGCTCCGGTGATGGATGCACCAAAATATCAGAAATCACCACTAATGAATGTGTCCAAGTAAACAAAACCCACTGTA
CCCCAAAAACTATAGAAATAGAAAATGAATAAATAAAAGTTAGGGATTAAAAAGAAAGTGGGACATGGTCATTCCAGAA
GTCTAAAATATTATAAGCTATATATAAAATACAAGTTTGTAACTATTTTTTGAGTACCTGCAATCAGCAAGTTTGCATT
AATATTACTGTTTACTCCCTCACTTTTTAAAACAACTAATTTTCTATTTCCTATTTTAAGACCTTACCTAAGATTGCTG
TCCTGTGGAATGGTTCCTAGCCCACGTGACCTTGTCTGTGTTGAAGCATGAGTGAATACATACTACCATCTACTTTAGT
GAATGTTGATGATAAAATGGCCAATTTCATGTATTTGTTTATTTTCAAGAAAACCTTAGAGCACTCGTTCTCAAACTTT
AGGATGCATCAGAATTACCTGGAGTGCCAGAATCCCCTGAAGTGGTTGTAAGAACTCATTGCTGGGGCCAGGTGCGGTG
GCTCACACCTGTAATCCCAGCACTTTCGGAGGCCAAGGCAGGCGGATCACTTGAGGTCAGGAATTCGAGACCAGCCTGG
CCACCATGGTGAAACCCCTTCTCTACTAAAAATACAAAGATTAGCTGTGCGTGATGGCGGGCACCTGTAATCCCAGCCA
CTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCCGGGRGGCGGAGGTTGCAGTGAGCCAAGATGGCGCCACTGCACTC
CAGCCTGGGTGGCAGAGACAAATTGAAAAAAAAAAAAAAAAAAGGAGTTTCTAGGCCCCATCCCCAGAATTTTTGATTT
TGTAGGTCTGCGGTGGGATCCAATTATGTACCGTCTAATGAGCTCCCAGGTGATAGTGACGCTGCAGACCTGGCTCCAC
ATTCTGAGAACCACTGCCTTAGAGCCTGCACATCAAGTCACGTTTATATTCCTGTGCCGTACTCCCCTGGTGAGGATTC
CTCTGGTCATTCATGCATTTACGTTTTTAAACTCCTTGGAATCAACCAGGTAGAGATTGTACTCTTGTTGTCGTATTTA
CCATCCTAAATCATTAGCATCTATTATCTTCCTCTGCCCTACACCACAACTCTGCTTGTAACCCATTTGGAGCGTGTTT
TCTATGTTCTTGCTTTGTTTACATATTGGTGGCCCCAACTATTTATCAGCTTATTAAAGACATCAGGCCACTATTTGTC
TATATCCCTGCACTGCCTAGCAGGGAGCACTGCAGGGACTATTGAATTCATGCACTGTATTCTCTGCTGGCCCATTGAT
TTCATCCTTATAGCCCCTGCTTCTCACCTGCATGTGTTTTTTTCACAATTTACATACTGATAAAATGAATTCTTGCTTC
TTGCTCATGTAAGAATATGGAGGCTGGGCACAGTGGCTCACACCTGTGATCCCAACACTTTGGGAGGCCGAGGCAGGCA
GATCATGAGGTCAGGAGATCGAGACCATCCTGGCTAACATGGTGAAACCCCCTCTCTACTAAAAATACAAAAATTAGCT
GAGCGTGGTGGTTTGCACCTGTAATCCCAGCTATTTGGGAGGCTGAGGCAGGAGAATCGCTTGAACCTGGGAGGTAGAG
GTTGCAGTGAGCTGAGATCACGCCACTGCATTCCAGCTTTGGGGGCCCCAAAACCCAGGAGTGAGACTCTGTCTCAAAA
AAAAAAAAAAAAAAAAGAATATGGAAGTTATAAAAATAATCTGTGATCATATAATGACTGTTTTCCCCAAAAAGGGCAT
TACTTTCCTGCTTCAAAGTATGTATTTCTTAACTAAAGTGTTTGTGGGATATGGCTGCGTGTTGGCATCACCTAGAGAA
CTTAWAAAAAAAAAATGAAAACAAAAACAAAACAAAACAAAAAACTGATCTTCATGTCCCAGAGGTTCTCTTCTAATTG
ATGTGGGCTGTGATCTGGGCATAGAGATTGCCAAAATTACCCCGGTGATTCTAACACATAAAAATGTTTTAGAGTTTCT
TAAGTACTTTTTTTCCTGATGAGTTTCAAGAGGGCCACTTTTTTTTTCTGGAAGATTATTTTCAGAAACACCTAGCCCT
TCTTTATTTGTATCTCCTGTAGATGTTTTCCTTCTGAGTTTTTCTCTGTGAAACAAGAAAATATAATGAACTGTCATTT
GCACGTTGCACAAAGCATGAACTTTATTTGGAGTCTTAGATAAACTTGTTCTGATCTAGAAATGAAAAATAATGAACTC
TGCTGAGTTCTGCATTTMCTGTCTGAAGTTAGCTTTACCATAAGGATCTGGTGGGTAAGTGTTTGTTGTTCTTGTCATT
AATTATTGGAACAGAGTTGTTTGGAGTAGATGATTCATTGTGGAACAAATCGTCTGATTTTGAGGGACATTTTCCATTA
TAAAATAATTATACATAAAAACAGAAGTATTGCTTTAATACTAAGATTTGTAACAATGCCATGTCATTCTGGTTGTAAT

Fig. 9.172

GACTCTGTGTCTATTCCACTGGTTTGGAAAATAAAACAGATTGATTTCAGTCATATGAAGATACTTGAAAATAGGTTAC
ATTTAATCAATTAGAAACTAGTTGTTTCTAACTTCACTAATCTTGTAAAAAGAATTAATTCCACCCCACTCCTAAAGTT
AGTAGATAGATAGATATCACCAGATAAGTTCCTAAAATATACCTAGGAAATAGCTCTTTCTCAAATAATGATGGTGTCA
GTAAGTCTAATGTAAGTCCATTTTATTTTACCCTTTCTTTAGGTTCTGCCCTTGTATCTTAGAATAATGAAATATGAAG
TGAAATTTGGTGTCATGGTTTACCTGTAGCCATTTTATAATTTAGATTCATGGGTTTACATTACTTACTGAAACTACTG
GGGAAACATTAACAACACAATAGGATTCCTAGATTGATAAACTTCAACACTCAAGCTATGACAGTTGTTCTCAGTCTCG
TCTTTGATTCAATGTAAAAATTTGGACAAGTTAATTAGCTTTCTTTTGCTGCGTGTATAGGGGCAGGATAAACTTGAGA
ATTCCCACAATTATTCAACCCAGATCAAAGATATTTGTCTCAGGAAATCAACAATATTAAGAAAAAATGGCTTTTTGAAA
AAAAATTAAAAAAATGTTTAGCACCTTCAAATATCAGATTCACATCCTCATCATCCTCACTTAGAGATTTTAAAACTAA
TAGCARTTTTGTATGGCACATTTGCATTTACAATGCATTTTTGTACACATTCTATTTTCCCCTAAACCCAGGGAGACTG
GAAGAGCAACAATTTACATATTTGCGTATTTTTAGAAAGTGAGTCTTAGAAAGGTTAAGTGACTAACCTAGGCTCAAAC
AGCCAGAAGTGTGTGGAACAAAGGCACCACACAGCTTTGCTGACTGTGAGCTCACTCTTTCTACTCCTCCAGCTATGCC
AGCTATACAATAGCAACTTGTGAGAGGTGTTAGGTGTGAGGGATAGTAGGGGGGTAGGGGTGGGGAGGGGAAGAGGAAG
CAAAGTCCTCATACTGATTGTATTTTTATCACTTTTCTAAAGGATTTTATGTTTTACAGCCTATTTGTCATTGGTGGAA
ATATCTCTACACTGGTGCTATAAACAGCAAAACATGCACTTGAGACTCCCTGCAAGCCCATCTAAGTTTTAAGGGTAAT
TGAGAATAGCAGCACTTGATACACATATCTTCATTTACTATATAGTGTGATCAATTATTTTCCCTGATACTAAGGGAAA
ATTAAACATCTTTTCATTGGTTGTTGCATTTCTTTCACGGTGTTTTTAATGCACTTTGCGAGCTTTTGTAGTTCTCAAA
ACTGGCCACTAGATGGTAGTGTTTAGTTAGTATTGTCGCACATGTTCCATTGTGGGAACTTTGATTCTAATAGGAAACA
TTTCATATATAATACTGCACTGAAACTGTTTCCCCAGTGGCTGAGGCACACGATAAAAACTCTGTGGCTTGAGCCTTCT
TTTTCTTTTTTAATGACTAGACCTCCCTTCATTCAACACAGACCTTTCTTCCACATACTACTTATTCAGCAATTCATTT
TTCTCCCCATAATAGTCTTTTTAAACACCCCACAGTGAGGGAGTGTTAAAAGTCCTGCCTTTCGTAGAATTTTGCTCTA
AACTTCTGAGAGGTAAAGCAGATCTGGTGCCAAGATGATGTGTTCTAGGGAAGTACAAGGACAATAGACTTAAAGACCT
GTGCTGCCAGCTTGTGAATAATTGAAGATTTGTATCTCGAAGTAAATTTCAGAGTACCCCTGTACTTCCTTGGGTATCT
AAACCAAATAAGACAGAAGTTGTAGTTGCCTGGTATAGATACCACATTGCCAAAATTTTACAGTATTTTGGACAATCCA
ATAGATGTCTTCTCTCTGCTTTGTTTAAGCCTTCTAATTTCCCCAGCAAGACAAAGCAAAACAAAATTAATTCACACAG
CCTGTTTGCATGATATGGTCCGATGGTTTACTATGCTATGTTTGTCATTAGTCACCCAAGCACAGAATCTAAAAGTCAC
TTATAACCATTTCCTGCCCCCCCATGACTGCTGATTCTTCCAAAACCATAAATCTCCTTTACTAATTCACTTGAATAAC
CAAACCTGCATTTCAGGTTCTCATTCTTTACACACCCAATAAAAAATGAGATGCCATCTGTTATTTTATTCATTAAGTC
AAGTYCTGTTTCTCATGTTCTGCGGGAATTCTTCCCATGTGGTTTTACTGTTTGTTTCACTTTCTTCAATTTCCCTCAT
CATTACACATAAGCATTTATAAAATACCTCTTCATAAAATCCACTCCAGTCATTCTCTGCAGTTAACTCCAAGATCTCC
AAGATCAAAACAGACCCCAAAGTTGTCAATGAAACTGTTCACTTGCACAGTGCAGGGGCTGGGGGTGTGGTTACTTGGG
TGTGTGAATATGAACTTTCGGTTGTCTGAGGACAACAGGAAGCCTTGTTTCTGGTTGCTATCATATTAAACTTTAGTTA
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ACCAGGCCACACATCTCTGCTTCAGCCAAATTGGTTGCGTTTAGGAGTTCTCTCACAGTAGCTGTCATCATCTCTTTTT
TCCATACCACAGAGGCTCAAGGTAGAACTGAGCCCCTTCCTTAGTTTTCCCAACCACCAGCCTTCCCTCTGCCCCAACA
AAACAAAACTTGTTCACACATGGGATTTCTGCATTGTACCACACTTTACTGATGGTTTGAAGAAATGGAAGCAATGTTC
ACCATAATGTGAGAAGTGACTGTGTTTAGACTTTCATATTCTTAAAAAGTCAGTTACCCAGTGATTTCTATATGGAAGG
TGTTAGCCTTTTGCTAGGTTTGCTTGGGTTTTTTCTTTCATTCCTACCCTTCCGTACCTCTCCTACTTCAAAAATTGCT
TATAGGAACTCCAGATTTTTCTTACTTAATGGCATTTAGTGCTTTACGTCTCTCCTGCTCCATCCACCTTTTAACTCCC
AGAACTACGCAAGTGCTCAGCAGAACAAAATGGGCTTTCATGTAATATTACCACAACTTGATAGAAGATATTTTTGGTT
ATAAATAGCTTTTAAAAAAAATTTTTTGGTGATTACATGTGGGTACGATGACTAAATTGAATTTTGCTCTTCGTCTCAT
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GAGACTTGTTCTGTCATCCCAGCTGGAGTGTAGTGGTGCAATCACAGCTCACTGCAGCCTCAACCTCCCAGGTGCAAGT
GATCCTCCTGCTTCAGCCTCCCATGTAGCTGGGATTACAGGTGCGGGCCACCACACCTGGCTATTTTTTATTATTTTT
GTAGATGCGGAATCTCCCTATGTTGCCCAGGCTAGTAACTCCTAGGTGTAAGTGATCCTCCAGACTCGGACTCCCAAAG
TGCTGGGATTACAAGTGCAAGCCCCCATACCCCCAGCCTTCTGCTCCTATTTGACCTAGAAATTCCATATAGTAGCCAT
AGCATTCATTCATTCAACAAATAATTATTGAACACCTACTTGCAAAAAGGAATTCAGTTCCTATTCTGTTGGGGTGATA
ATCTAGTAAATAATAATAATAATAATGAAAAGTGTCCATGCACTCTTCTAGGCTCCAATAATCCCTATGAAGAGAGGGT
ATGCTTAAACAACAGATGCTTATTTTCTCACGGTTGTGGAGGCTGGCAGTGTGAGATCGGGGTGCCTGCATAGTGGAGT
TCTAGTGAGGGCTGGCTTCCCCTATGCCTTCACCCAAAGTTTATGTGTTATTAATATCAGCAGCCCTCTATCTCTGGAT
GTCTCTGGTGCCTTAGAAGACATATTCTCTACAGTTAAAGAGTGATCCTCAAGAACGGACAGGGTAAATATATTTTATA
TTGCTAAATGCCCCCATTTGAAGGGCTATATACCATTTCATGTAGCAAGGAGCACTTAATGGCTCCAGCAGAACAAAAT
AACTCTACAGAAAATTTTTATTTGCCCAAAGCATCTAACGAGCTGGTCCTTCCATGCATGTGGTGGCACTCTTGTGAAC
TGCTTCCTGAGATCCTCTTAGTGCAAAGCCAACAACATTCAGTACATTTCCTTCACTTGCCTTTTGGCATGTCCATGAC
AATATTTCCAGCTGATCTAACTTCTAGAAAATCTATTTCCCACAAGCAACAGGTCTTCTATTTTCCTGCTTAAGAGTGT
TTATTTTTGCTTTTTTCAGCAGCTTCACAACTTCTGACTTGGTTGACTTTTTTTTTTTTTTTTTTTAGAGAGAATGTCT
CTCCTCCATCTGCGAAGTGCTGCATTTTAGGTTTGGTCTGACAATTTGATGCAACGGCTCAGGTATATATGACAAGGAA
ATGGAATTTCTATCCTCGAAATCAATTCTGAACAATAAAAGCTGAGAGGATAAGTTTATTCAAAGGTGATTTGGTATTG
CGACAGGCTGCTCCAAATCAGAACTCAGCAACCTGATTTTGAAAAATTTCCAAGTTCATGAAAAGAATCACTTTGTACA
TAAGGGCTTTCTACTTGTTTGGGTTTGAGCATAACTAGATAGCTTAGTGGGATATCCATATTCTTGCATTTGATGATCA

Fig. 9.173

CATTTGGCATCTAAATATTATGCTGTTTTCAAATGAAAGAAATACTGCTGAATAAGAGAGCTAGAATGAATTACATACA
AAGAAAACTTAAAATAAGTGTCATCTAAGAAGATGAAAAAGCAAACAAGTACATATGTTCTTAACTTTTGGGGGCTTGC
CTTTAATTTTTTTAATAAGGCAATTATCTGCTATTAGTAATTATAATAGGAGCTAAAATCCAGTTAATAGTCACTGTGT
GTGAAACCCTGTGCTGAGCACCCCAGGGTATGGCCTCCAAGAGGACACACAACACTCTTTTTGGAGAAAGCTGAAGACA
GTGGGGGCAGTGACTGAAGGTCACGGAGTTGGTAAAAGGCAGAGCCAAGCTCAAACCCACACAGCCACATACCTGCAAC
TGTGTTGTTAGCACTGCACTCCCCAGTTACCAAAGCCTTGTTTATTTCCAGTCCTAAACTCTGCTTAAATGTGCATGA
AGAGTAATTTCATTTTTTTTCCTTTTCTAGACTGTAAATTTGTATAATTGGATTTCTACAGGCTTTTGTGTTTCTGGTG
AGATTCAAAATGGATTTTTCAAAGTTACGATATTCAGTGACTCCTATAATCTAGAAATTTCTCCCAAGACACCAGACTT
CCTCCCTGATCTTTTGACTAAAAGCCTGGTCCCCAGCTGTATTCATTTCCTAGGGCTGCTGTAAGGAAGTATCACAACC
TAGGTGGCTTACAACAGCCAAAATGCATTGTCTCACAGTTCTGGAGGCCAGAAATCCAAAAGTAATGTGTTGTCAAGGT
TGTTTCCTTCTGAGAACCGTGAGGCAAGGATTTGTTCCAGGCCTCTCTCCTTGGATAGCCGTCTTCTCTCTTTGTTTCT
TCATAGTGCCTTCCTCCTGCATATGTGTGTGTCTGCATTTCCCCATTTTATAAGAATTCCCCTTCACATYAGATAAGGC
CCACTCTAATGACCTTATTTTAACTCGATTACCTCTCTAAAGACCCTATTTCCAAGCAAAGTCCCTTTCTGAGGTACTG
GGGTTGGAACTTCAGCCTATTTTTGCAGGGACACAATTCAACCCATAGCACCAGCTCTGAACCAGGGTAGTGCATGGAG
GTGGAGACCTAGTACCGTGCTAAGGACCCCAGCCGACAGTGTGGTCCGAGGCAAGTTTCCCTTCTGCCCAATAGGGGAT
TGGATTGACTGATTTCTACTGTAATATAGTACAAGTATATATAGTAGAAGTATATATATAGAAGTAACATAGAATTCTA
TTTTTATAGAATGGCTGTAATTTATTTAATAGGTTTTCTCACTGAAGTAATTTCATAAAAGTTTTTGGAAAGTTGGCTT
CATCCTTCTACTTTCATGCATTTGCCGCAGAGATTAAGTGTCTGCCAGGTATTCTTTCAGCGTGATCCACCGGGGAACC
CACAGACCCAGCCTCCTCCCACTTTCCTTTTCCTTCTGAGATCTCTTTATTCTTCCTGTTCTGTGTCCAAAAAGAGGAA
CCAACTGCCCCCTAAGTCTATCCTCACATATAGAGCCTCTTACATGACAGGTGTCAGGAGAAACTAAAAACGATTAGAC
TTAGAAGGAGCTAACTATTAAATGGTGAATGCTCAATCAATATTCATTAATCAGGAAGGTTGACCATTGACTTTACCCT
CTGTGACTTCACTGGCTCTTTCACAGCAACGATTCTTGAGAAAATACATGGCCAAGCCTTACATTAGCTGATCTAGTTT
TCAGAGCCCCGCTAGGATATGAGTCCTGGTATTGCAGATGAGGAAACAGGGTCTCACAGATACACAGAAGCTCCTCTGG
GTGCACACAGTGAGTACTGGGATAGGCAAAGGCTGAACTCAGGCAGCTTCTCTCCAGGATCCACCCTGAGTGATGAGCT
GTGTCCCAGGCTGGAGAAGAGCCATGCTGCCCACTGTCTGGGCCTATCTACAAGCTCTTTCATTCATTCTTGGATTTTT
CCAGCTGAAAAAAAGTGTTATATGAAGGATCAGAGATGGCATCTTAAACTTTTTTTTGCACAATTCATCATTAATTCAC
TGTTTTTTAAACTGTTGTCACAAAGAGTTGTTTTGAATGCCTTGATGAACTATGTTTTGTTTGTTTTATTATATTTTCA
CTTGAGATTTTTACTGTGAAGCATGCTATTTTGAAGACAAAATTTTTAAAAATAGAGAAGGGCAAGAAGAATGGTGGAC
AATGCAGGAGGTGACAATTGGTATAATTACAGTAAACATTTATAGGTCAGTGGAACATAAGCCCTGAGGGAAGGCTCTG
AAAGCGGACCTGCAAGCAGGAGGGAGGGAGGGAAGGAGGGAGGCAGCCCTCGCAGGCTGCCGGGAAGCACCAGGGATGT
CGTGCCTCACTGTGCCAGCCTCACAGATGGCATCTCAGCGACATGGCTGTTCTTTTGTCTTTTCTTCATGAGCATCTTA
GAGAAGCGCATTTATGCACATTTCTACCTACAAAGTTTTGCCTCAGTGTGACTCATCTTCTTTCTGTCTCAGATAGGAT
TACTCTTCAAAGGAAAGATAAAAAAACAAGTTCTGAATATAAAGATGAAGCCAACTGCAGGGCTTGTTGAATTACCTCA
GAGATAGCTAGAGTTGTCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGCGCCTCTGTGTGTGTGT
CTGTGTATCTGTCCATGTCTGTGTGTATGTCTGTGTCCATGTCTGTATGTGCATCTGTGTGTGTGCATGTGCCTGTGCA
TGTGTGTCTGTGCATGTGTGTGTATACACATGAGTGCAATGTCCCATATTGGCAAATACCACATGGTAACGTCCTGCAC
GCCACAGGAGCTGTATATATGAGCTGTATTTTCATGATGGCCCACTGGGATAGGGATTAAATCAGATGATCACCATTTA
TACCTAAGTAGTAACACTTAAAAATGCAATTGCTCTCTGTCACCACGGCTTAATCTATGAGCCCCTAAGGGGAAAAAAT
TCTTACATTAAAAAAGCCATTTCATATATAGATAAATGTTGAATAGGCAGGTGTTGATCAGAAGGTCTAATCCCCATCC
ACGTGAAATGAACAAGTCAAGCAGATAATTGTTTTACTAGAGCTTTCCTTTGCATTAAATGTGCCTGGAAAACATTTCT
AAAACCATTCTTTTCTTTTTGGTTGAACCATTATGAATGAATCTTCATCCTTTAAAAGGCTAGATGTTCATGTTCAACT
GTTTTGGCAACTGACCTAAACCAATATTATTATGAACACATTTTGGTTGTTTTGGTTGGACATTGGTAACTGCCAGTGA
AGTTGGAGGTGAGAGGAGTTAACTACTTCCTTATAATGTCACCACCTAATTAGAATAAAAGCATCTTAGATTAAATTCT
GATTTACATAAGGACATTTATTAACTAAACAATTATTCAGCAGGCATGAAATAAACAAATCATATGACTAGTTCTCTCT
CTAGGTGCTTGGCCACCGTTTGCAAGCTTCCCTTAAGGCACAAAATCCAAAATTCCAGAGTCAATATTTCATCATCACT
ATAGACAAAAGTTTGTGGTATTCACAGCTGGACGCTGGACATCTCCCAGGACGTGGTTCCTGAGTCATTCTGCCTCTGA
GTGTGTTGCTCCCATGGAAATCATGCACCTCCACGGAACTCACTCAGGCTCCTCGGGGACTCCTGAGTCTGCAGTCAGA
TTGCTAGTCTTGCTCTGATTTCCTACCTATCGGACATTCCATTTGACTGTCTTGCCACTGAACTCAATGGGTGTAAGCT
GACTCTTCTTCCCTGCATATCAGCATCCTCCTGACTTCCCCACTTCTGTGAATGTCATGATCATTCTTTCTGCCACCTA
AGCTTGAAGCCTACAGTCATTTTTTAACACAGCCACCTTCAGCTCCAATTCCAATTCCAATCAGTCACTCTTTTCTCAA
ATCTCCCTTCATACCAGTTCCTGTCCTTCTGTCTCTTCTACCCTAAGCCAGAGCCATATCTCTGCAGATCAAGGGCCTT
TTTGTTCTGTTTCTTCCCCAGTCAATTAGTTTACATGATGCCAAACCCATCTTCTTAAAACCACCTGGATTAGATCACT
CCTCTGTTTGAAGATTTCCAAAGAGGCCTTATTTTGTAGTGGAAAATGTCCAAACTCCTTTGCATATTCACTTATTCTC
AGCATGCTTTTACCACCTTGCGTTCTTCTCCTTCACGGCACAAACCTCTATGCCAGCTGGATTTTCCATCCATAATCCC
CCAAATACATCACATGCATTGTTGCATTGGCCACCCTTGTTAGTGCTTTTTCCATGTGGTGTTCTTACTTTCCTCCTTC
ACTCCATGCCCACTTCCTCAAAACACACACACACACACACACACACACACACACACACACACACACACACACAGCTTCTTGGA
GCCTCAAAGTTGGTTGCTAGTATTTTAAGTGCCCGGAATTTGAAATGAAAAAAAATAAAAGTAAACTGGTTTTAAATGT
AGGCGTTGCCACGTATTGGTTCTACTGTGGCCTCAGACTTGTTATGAAATATTTCCAAGCCTTAGCTTCCACATGAGTA
CAATGGGAATAATGCCTACCATCCTATTGCCCATCCTTAATTAATCTTAGTTCCGTTTCTGTGCCACGTTTCCTCCCCA
GGGAAGCCCTTTATACCCTTACTACTCATGGATTTATCTCTTCTCTGAGCCCATAGAACTGAGTTCTGTTGTCACTGCT
TTAGTAAAGTCACCATTTGCTTGTTTAAGGTCCCTCTTCTATTTCACTTATTGTGTTTCGGAGCCACACATTGTATCC

Fig. 9.174

TATACTAGACTTTGAAAATACTTTAGTTGCAGTGCATTATTTTTGTGTAGTCAGAGTACCCAGGGCAGTTTCTCACACA
TTCTCTCGTTTTGTCTCATAACATCCCAGGAGCTGGATATAATCTGTGATTTATGAGGAGAGAAAGTGAGAGACAGAGG
TGTAAGTGAGTTGCCTAAGGTCACTCAGAGAGTGAGTGGCAGAAGCAGCACTTGAATCAAGTCTTAGGATTCTAAGCCC
GGGGCTGTCTGCTCCCTCCTAGACCTGTAACTTTAGAAGCAGGAATTTATTTCATATTGCTTATATTTCAGTATTTATT
TTTAACCCTTACAGGGCCCGGTCTTGTGACTGACTGTAATTGAGAAGGTACTCTACAAATATTTTTGAAAGAATAAATA
AAATGAATACTACAGACCATGTTAATAATGTCAAATAACTCTGGGAGTTTGAGGGATAATTCTGTCAATACGAGTTGAG
GGTGTGCTTGGCCTCTCCATCATTTACCCTGCTTTTATGAGGGTTAGCAGCACAATGTCTTCATTCTAAAACACAGAAT
CATGAGGTTAAAGAAAGCATGCAATGCCATCAGCTGAGAAGAACCAGAATTCACAGTGCAGGTTCTCTAAAGTGGTTTT
GTGTTGCTCTCAGCGCCGTGAACTCCCACCATTATATTCATAGCTTTTTAGCCTTTGGCTAAGATCAAGTAGAGTGTTT
GTTCTCCTGGCTTTTAATAAGTAATGTGTTCTCCATCCAAGGACAACATATTTAGGCTGTACATGCATTACGAAGTATT
AAGCTCCTGTAACAGTAAATTTCTCAACAGGAGATTTATGTGAATTCTCTTGGATGTTATTCTGTTGACATTAGGAACA
ATTAGGAATATAAAATGCCATGGCAGATTTTTCTGTGATGCTGGACGTACTGTCAGGACTCTGAGTCTGTGTACTCGGA
AGTCTTCCTCAGACAGGGACAAGGCGCATTCTCTTTCTTAGGAAGAGAATTAACAGTGCACTCCCACCTCCCTGTGCTC
ACCACATGGGCACACATCCCAGGGCGAGGGTGGAGTGAGCTCAGAAGAACCCACGCTGAGCACAATGAAAGCAAAATTA
TTATCAGAGAAAGAAACAGATTGCAGCAACCTGGGTTTAACAGGACACATAGTAGTAGACAGGAAGTTTTTCGTGATCT
ATAACACATTTTCATATTAGGGTCATGTTAATTTCACAATGAATTGCATATTAGGCTCAATTAGAGAAACAATAAAGAA
GGAAGACGGGATGACAGAAAGCATTGAAGAGGAGGAAGCAGAATGGAGGCAGAGGGTGGAATCAAAAATAAGGACAAAG
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GTCAACAGCTTTAGTCACACATCCTGTTATTCACTTTGGGCATCAGAGCACATTTTCACTACCCTTTGAAATTTCCATA
CAGTCTACAGCGATTTTGTAGCAATCTTTCTTTACCGGGAAATTGCTTATCTGCTTTTCTTTTCAATCTTTGAGGTCAA
CTTATTAAAGGCTTTAGTTTCACATGAAGCCCGAAATATTTTGAAGGTAAGAAAAAAATGTGCCTTTGGTCTTAAATAT
TTCCACTTAAATCTTGATTCTGGGCTACTTTAATAATTCCAAAATAAGAGTGAGTGGCTTCTTTTTTCAATAACTGAAA
TACAACATTTAAAAACACTCATGTAATTATTTTGCTGTGTTCAGTTGTTTGAAAGTAGACAAGGTTTGATTTGACAGAG
CTGTGTTTTAACCTGGGCTCTACATGTCACTAAACTACTGTCCCCTGTAAGCTCCTGTTTCCTCGTCTACAGATAGAGG
TACTCCAGTAGCTCTCCAGGCTCTGTGTGTCTCTGTCACAGGTTTGGCATAAAGTAGACAGGAATGGTGTCAGTTCCTC
CCTCCCCAAACTCTCTCCAATGACACTCCCACCAAGTGCAGAAACGTACAGAAAGAACTCTTCCTGCTTTTCAACTTCC
ATTGATCACACTGAAAGAAATATCACATTAGCTTATAAGGCTCAAAATTATCTTCAGTGCTATAGCTCTGTGTACTCTA
AAATCAGAGCAACATAACTTTGGTTCTGGATGAAATCGAATCAGGACCTGACTCTACTCCTAGAAGAACGCTGACCCCA
AACTCCTGTTTTGCAGAACCCTGAAGGAGCAAGTAAAGATGCCAGCCATTAAATATGAAGACCTTCAGAGACCTAGAAC
TAATGGAACTAAATCAAGGATTTCTATTTTATCTTAGATTAAAATGCCATTTATATGCATTCAGGGCATAGTTTTCACT
CCCATGAGGAATAGATTCATACCTGTATAAAGCTGGGAATATAATGACTAATTAAATATACTGTATGACTTCAATATAG
CCAAGAAAATTACAATCATTCCAAGTAATACTGTTTTTCCCCAGACACAAATCTGAGGATCTTGAATCTTAGCACTGGA
AGGAATGTAGACATCACGCAGGCTCATCACTTCTCTGGCACAGAACTTGACTTGCCTTGAGCACATGTCTGGTAGCTTC
TTCCTGGGAACATAGATGACATAACGCATATTGCCTTTCCAGGCAGCTTGATCTGTCATGAGACAGCTCTGGCCTTTTA
GAAACCAGCCTTTATACTGAGCTGTGAGCCTGCTTCTCTGTATTGCACATTTTTTGTTCTTAATTCTGAACAAAAAGTT
TTTGTGAATTTTCTTCCTGGAAATGGTCTTCACCACTTGAAACAACTGTCATGCCCATCTGAGCATATTTCTTAGGTGA
GGCTTCCCAGTTTGGGAGACGCTTCTCTCATAAAATATTTCTGAATTCATCAGTATCTCTGTTCCTATAAAACGCGTGG
CTGTCTACTTCAGGCAAATCCTAACCAAGCTCAGGTAACAGTGAAGTGATTGTTTGCTGTGAAACAGTATTGTACTGTT
GAAGTTAAAGAGGTCTATGATTACATTGTGTTTATTTTGGATTTTGCATTATTGAGTATTTTTTACTTTATTTTCTTTT
TGTAAAGCCCATATCACTACCTATAACAAGCTTTTGATAAGTGAACTTTCTAATTTTTCCTATTCTATAGCTATGTAAG
GGAATCTTTAAATTTTGCCAGGACTTTCTAGCCTAATGCAACAAGGGAGGTTACATTAACTATAATAATTTAAATTTCA
TTAGTTTTTTCCCACATTTGCTGAAGCAATTCTTCTACACAATCTATTTCATTATTTCTGGGAGTTCTAAATGTGTCCC
ACAGGAACACATCCCCCTTCTTGGAACCACTGCTCTTCCACCAGAACCAGCAGCTCTCTGGACTCCCCAAGGCTTATTA
GGTCTCATTGTTACCCAGGGAGTCAAGCAGCTATCACAAGGCCATGCTTTGGCTTTGTAGCTGCTCCAATGGATGTTAA
AATTTCTCACTTTGTTCCTGATACTGTACGGAATTATATGCAACATCTCTTTACTTAAAAGCTCTCTGCTTCTCCCAGG
ATCCAGAGATTCATCCCTGGAAAAGCATTCAAGTGCAGCTGCCATATTCCATTTAGAATGCCTCCTTCCTTCAGACAGC
CAAGGTTTTGTTATTGGGCTCAGCTCTATGTGCCCAGCTCCTTCTTCAGTACAAGGAGCTCTCTCCAAAGAGGTCACTA
AATCCCCTGCAAATAGTCTTTAACTAGACCTTTTCAAACCTTGTCTCTTTTTTTTCTTTGAAATGACACTGTACCATGA
ACATTTTTATGAAATCATTAAACATGTTAAACTTCATCAAAGCCATCATTTTAAAGTCTTCCATGATGTCTATCTTATA
GAGATACACCATACTAGAATGCATTTTTTTCATTTTTCTATTGCTGAGAATGTTGGGTTTTATACATAGCTTGTTATTT
TAAGTAAATGTTGTGCTTTACCTTGTTCCTATTATACTTTTAATTCAGCCTACTGTTAGCATCTGTGGATGATTTTCTA
TGCTTATATGTCACTCAATATATTAGCATCATTCCCAGCTTTTGGCTTTACATATGCATTTTTAAGATGTGTCTCTTAC
CTTTTAACCATCAAATCAGATTTTAGTTGCTTGATAGACCCAGCTTTTATATTTCAGTTTATGCCACCTCTAAGGTCGT
TGTAGTGAGATGCCTATATAAAAGACATACAAATTCAAGGAGTGAATTAAAATCTCACTTGAAATTTTAAATGTCACTG
AATATTAATTGTGGTCGCTAATTGGTATATTTTCTAGTAATCACTTCAAAAGCTCCTCATTAAAAATAAATCATAAAAA
TATAGAATTATAAGAGCTTTTAGGTATAGTTCAATGATCTAATTCCATCCATTTATCTGTCCATCTATCCTTCAGCAAG
TCATTTATCACCTTCCTTCTGTATATTACAGATGATAATAAAGACATCTGGGACAAAAAGGTAAGTCACAGACCTACCC
ATGTGTATGGGTGATAGAGTAGTGAATACAAGTGACAAAGGGTGTGATTCCTTCTGTTTGAGAGGTGAAGAAAGTATTC
CCAAAGCAAGTGACATTGAATCAGCACCTTAAGATAAAACGAAGAACTCAGCAGAAAGAAAGTGAATGGGAAGATGTGG
TAATAGGTTTAAATGGACATGGCATGTCGGCAACTAAATTTCTGTAGCTCCAGAATATTCTCCCCAGTCCCCTGAGACG
AAGTTACAGAGCTGTGAATCCGGTAGTGAAAGCCTTGGTATAAGGCGCATAAGAAATGTGCAGATTATCTACCATGAAA

Fig. 9.175

TAGAGGAAGAAATCAAGGTTATTCAAGTAGAGGAATGACACGTTTTAGAAAGACTTTTGTTATAACGTTATGGAAATG
GATTATAGGCTGGAGGCAAGAGATAAGACATTGTCAGTGTGACAGAATATTTTATTAATAAAGCACATAATTTATACTC
AGATCTATGTGAGATGAGACCAATTCATGTCAACATGTCCAATGTTTTTGAAAAAATGCTAAGTTTTTATTATCGCTTT
TGTTTATTTCCCTGTGAAATATAGTAGGCTAGCCCTCTATTTCTCCTGGCGAAATCTTTAGATAGGTGGAAAAAAAAAT
GTTGAAAAAGGGCATCAATGACCTCTTTTATCTTGGTTTTATCTGCCTTTTGGAAGATACTTGATTCAAAGCTATGAAA
AAGCATCTCACCAATCCCGTATTTCACTTGGTTGGACGATGTGTCAAGAGAACGCCTGAGGCTTCCTCTGTCCGTTAAC
AGGCCAGTCATGAGTCACAGTCTGAACATGAGGAAATGTTCATGTACTTTTTCATAGTCATGGCAATGAGACTTTTTTG
TGCCCAAAGTACTATCCTCGCCTAAAGTCCCTGTTAAAAAGGTTATTTTCTGCCACAGGCAGGTAGCAGAATGTCAAGA
TCCAATTCCAAGTGCTTCATCATCACTCGGATAGCCTCAGGAAGCTGAGGTTTTACAGCTGCCTGGAACCCACATGCTT
CATGTGATGTAGAGCAGCCCTGTTAATTAGCTGTTTCAGGATTCTTAATGCCCTATGGCTTTGGAAACACTTGTTAGCC
CACAGAGGGAGGGGAAGAGCTGGAAGCAATTGGACTACAGCCTGAATTTATTTTAATTCAATTCAGTAACCACCTTATC
TTTCTAAATCCCTGTTTAGAATCTGTTGAAAATTATAGTTGATTTAAGTTTTTCTCAGTGATGCATCCTGAGAGAAGAG
GGAGATTACAATTCAAGGTTTTCTGAAGCCACAGAAATGTGGAGTGCTGCAGAAAGAGCTGATCGATGGAACTTTCCAG
ACACATGTATGCAATTTTCTAAAGGCTAGAAAATAGATGCCGGGGATGGGGAGAGGGGAGGCCAGTTGATGTGGAAAGG
CTTGTGTAGAGTGCCCACGAGTCTGCATTTCTGTTCACCTACCAGAAGAAACACTGCCAGTTCCCCCCACCCTCACCCC
CCAACCATTCTCACTGCAGAGAGCTGGCACTCAACAAACTCATAATTTTTCTCAATACAATTCTCATGACATAACCTGA
CCAACCATATGAAACCTAATGAAGAAAACAACCATTGCCATTGGCAACAAATGCAGGAGTTGCATCACAAGTAAACCAC
ATACTTTACTTCACAAATTTGAACATTAGAGTACCACCGGCAAAAACATGGTACCATCCTTCGGTATGGATGAGATATC
AGTTTACAAAACCTTCACTGGAAAGTCCATACCAAAATTTTTAAAATGCATGCAAAAGCTAATTGTGTTGACATCTTTC
TTATCAGAGCTATTGCAAATTATTTTGTCTAGAGGTGGTTCTTAAAACAGCCACCTGTCTGTCCACTAATCATGTACAT
AGCATCCTCTTCCTCATATTCATCCTCTGAAATACCAAGAGGTGAAAGAGTGTTTCAGTAGCTCACCATTCTTGGCTGT
TACATAATGGGTCAGATTCCTTTCTGAGTAGTAGGAGAGGTCAGTGATCCAGATCTATATATCTTTGTGCTTTTTCCAC
TAATACATTCTTAGAACCTAGTAGGTGCTCAATAAACGTTAGCTGTATGAATGAGTTAGTGAATCAATGAATGAAGTGT
TAATTTTTAGAAATATTATGGTCAGAATTTTACTAGGAAAAACATTTCTTATAATCACAAATGAAAGCTAGGTTTACTC
AAAATTGGGAATAGTAAGTAGTCTTTCCATTTCCCATACCACAGGTATGCTTGTATTCTTCTTATATGCTTATGAAAGA
AGAGAATGTGGATTAAGTTATAAACTATTTGTACATGATATTGTATATGTAAAAATCATGTCAGTTTTGAGGCCAGGAT
TTCTTTGTATTGAGTAAAATTTTCCTAAATATTTGCCCATTGTATTAGTTCATTCTCACATTGCTGATAAAGACATACT
CAAGACTGGGTAATTTATAAAGAAAAACAGGTTTAAGGGACTTACAGTTCCACGTGACTGGGGAGGCCTCACAATCATG
GTGGAAGGCAAAAGGCATGTCTTACATGGTGGCAGACATGAGAGAAAATGAGAGAAAAACCATGAAAAAGGGGTTTCCC
CTTATAAAGCCATCAGATCTTGTGAGACTTATTCACTACCATGAGAACAGTATGGGGAAAATTGCCCCCATGATTCAAT
TATCTCCCACCAGGTCCCTCCCACAACACATGGGAATCATGAGAGCTACAGTTCAAGATGAGATTTGGGTGGGGACACA
GCCAAACCACATCACCCATTTTAAAACAGGCTTGATATCAATTTATTGCTAGAAAACTATAATTTGTATTTTCTTTTAC
ATTTTTAATGACTGATTGTACATTTGTTCCCTCAAAAGAGGCTCTCCAAAATACTGCCTAATTCCTATGTTAATAGCAA
CCCAAACATGTTTTCAATACTAATATTAAAACAAATTAGCTTAACAAATACAAAAGGTAATGCCTGGTTTATACAATAC
GGATTTGAGAAATGCAGGTTTCAACCTGTTCCACACCATGCCCTTCATTATATTCTTCTGCCAGAGATTTTATTCTTTA
CTTTTCATTCAATCAGAAAGAATTGAGAGGAATTTGAACCCATTCTGCCTATTTAGAATATCATTTGTACTGACTTTAA
TCTTTTGCTCCTAATCCATGAATTCCTGAGGTCTTTTATTTACATCCATAAATTTGAAAAGCACAATCCCCTTTTTTTT
TTAAAAAAAAAAAAAAGGAAGTTACTTTTGGGAATCAGAGACATGTACCTCTTTGTTCTCTTGGAGAGCTGTGGGTTAT
GGGAGGGAACTCCTCATCCTGTTTCCTGATATGCAGTGACTTCTCTCTTACACAGATGAGTCCTAAAACCTTTGTGAGC
TCAGACAAGTTGGCTGGTTTTATTTTTATTTTTTTATTTTTGAGATTGTCTCACTCTGTCACTCAGGATGGAGTGCAGT
GGCCCAATTACCAACTCACTGCAGCCTTGACCTTCCAGGCTGAAACCATCTTCCCACCTCAGCCTCCCAAATAGCTAAG
ACCACAGGTGCACACCACCATACCCACTAATTTTTTGTAGAGATAGGGTTTCGCCATATTGCCCAGGCTGGTCTTGAAC
TCCTGGTCTCAACCAATTCACCTGCCTTGGCCTCCCAAAGTGCTGGGGTTACAGGTGTGAGCCACCATGCCTGGCCAAG
TTGCCTGGTTCTTTACATGGAATGTTCTTTACATGGAATGTTCCAGGATCAATTAAACACAGATAAATAACAACTTATG
TTTTGTAAATAAACACATCTGAATGGAATCTTACTCCAATTTAGATAGAAATTGATATTTTTCCTTTCAAATGAAATAA
ATGTTTTAGACTAGGACATCCCAAGTGAATTGAAGATTGGTACAGGAGCCTGAGGAAGGAAGTTTAAGAGAGTGAAAGC
ATGAGAGAAGAGCCAAGATTATGTAGCCCAGAGAAGGAAAGAATTATTACCTACCATTACTTTAAGGGACTGTGCTTCC
TCACAGTAGTGGAAGACAGATGCTCATTTTTTATTCAAGACTGTGTAAAATAAATGGCCTTAATTTATAGATGTGGATG
CTGGTTTATATCAATACACCTCAACCTGGGATGGCTCCAAATCTTGACTACACATGGGAATAACTTGAGGAGTTTTACA
AAAAAACTGATGCCTGGGTCACACCCTGAGAGATTCTTATTTATCTGGTCTGGGGTGGTGTGGCCCAGGCACTGAAATT
TATAAAATTCTCCGGGTGATTCTAATATGCAGCCAAGGTTAAGAATGCAGCTGTACAGCTGTAGATGGAAGAATACCAA
AACCAGGCCTTCTGCTAGTGCCTGAGCTTCTCCTCATTTTAGTTTCTGTGATGTGTTCAGACATTGTTTCTAGAATCTC
CTGGGTAATATGAGTTATAGTCCTTTGGATGGAGTAATACATTAACACATCCATACTCACATAGTTTGGAAGGGGCCAG
GATGCAAAGGGAAGTTGGAGGAGGAAGAGAAGGAAATGGTAAAGTCCAAAGCATGGGTGAAGGGGGGCCAATATAAACC
CACAGAGCAAAAAGGAGATGTTGGGTCATCATATTCTATTACATAAATTGGATTTACATTTCCTTGTCTTTCATTGCTG
GTCTTTATTCCCACAAGTCTCCAAATACAGTCATAAAATTCTCATGAGTTGTTATAGCAAAATTGCTTATCATTTACTA
TTTCTTAAATGAATGCATAAACTGTATTACTTTGGCAGAAAGGATGCTGCTGGGTATCATATGTAATGTATACTAGTAA
GGTGGACAGGACCATTAGGACTTTAAATTCCTTTATAATCTCAAAAGTCTGTGATTCTGATCTTCCTGGTCTTGCAACT
CCAGAAAAGGTGGTAATCACTGGAGTAGGCTATTTATGGGCCTGTGAGATAGTGAAACATGCTATTAAGACAAAATGAG
AGACTTCCTTCTCTGAAATGGTTCCATATAAAAGTAATATATGGCTTAAGTATCCAGGGGCTCATGTAATCTCTCCATG
TCAGTATCTTTTACGGGGAATTATTTAACCAAACATGTATTGAACACTTACGTGCTACACTAAAATCCCAGATTTGTCA

Fig. 9.176

AGTTCCCGTTTAAAAAGTGGGTACTAAGCCTAAGATATTAGCAATACTTGTATCTGAAAAGGCCTCACATCTAGAAACT
ATAAAGAACTTCTAAAAATCAATCAAAACAACATAGTTCTTAGAAAATCACAAAGGAACAGGTTTTCAGACTCGAGGA
TGTCTATATGGTGAAAAAGCAGCAGTATTTTAGAGTTGGTCTGAACTGACTCACAGGAACCTATTTTTAAATGTCCAGA
AATTTGCTAAGCAAATTGTTAATGCATCAATTATCTAAAGTTTAATTATGTAAACTTCAAGTTATCTGAAAAACATAAC
ACATACTCAAAACTCTCATCCCTTCCTAAGTGTTTTACTACATTCTGTTATTTCTGTTTGTGAGGTCATTTGTTTATTG
CATCTGTATGATGGAAACACTGTATAAAATGACATGTTATTCCCAACTCCACATAGGCTGATATAACGTTGGTAGCTTA
AAATCAGCTTTAGTCCAGGTATTTATACAATGGAAATGGAAATCAGCATACGCCACAAATCAGGAGTTGATTTTTTTTT
TTTTTTTTTTTTTTTTTTTTTGAGATGGAGTGTCGCTCTGTCGCCCAGGCTGGAGTGCAGTGGTGCGATCTCGGCTCA
CTGCAACCTCCGCCTCCTGGATTCAAGCGATTCTCTGCCTCGGCCTCCTGAGTAGCTGGGATTACAGTTGCCCGCCACC
ATGCCTGGCTAATATTTGCATTTTTAGTAGAGATGAGGTTTCATCATCTTGGCCAGGCTGGTTTTGAATTCCTGACCTC
GTAATCCACCTGCCTTGGCCTCCCAAAGTGCTGGGATTACAAGCATGAGCCACTGCGCTCGGCCCAGGAATTGATTTTT
TGTTTAATGGTGTTGACTGTCTACAAACTGATTAAGAAAATGTTATTAAAGTTGTACATCATGTCTGCAACCATTAAAT
TGTAAGTAGCACAAAAAAATCTGGGGGAAACAGTCTTCTAGACTTTCCAGATGCAGCAAAGAAATTGCCTTGTTCCAACA
TACATTTTTATTGTTTCACTTTTGTCTTACTTAACCACTAAGTAAGACATAGTTCCTACATAAACCAATCATGTAGGAA
TTACACTCCTTTTTCAATTACAACTTTGGTTTGATTACCTTTGTGGTCTTCTGTTCTATCACCGTCTTTTTTTTTTTTT
TTTTTTTTGAGAAGGAGTTTAACTCTTGTCACCCAGGCTGGAGTGCAGTGGTGTGACCTCCGCTCACCATAACCTCTGC
CTCCCAGGTTCAAGCGATTCTCCTGCCTCAGCATCCTGAGTAGCTGGGATTACAGGCACCTGCCAGCACATGTGGCTAA
TTTTGCATTTTTAGTAGAGACAGGGTTTCACCACGTTAGTCAGGCTGGTCTCGAACTCCTGACCTCAGGTGATCCACCC
TCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACTGCGCTCAGCTCACCATCGCTTTTAGATAAGGAAACT
GAGCCCTAGAGAGTGGTTGGCTCGCCTCAGGCTCCAGGACAAATATGACTTAATCAAAACTATACTCCTGTTCTTTCAT
TCACATAAAACTACTTATCTAAGGATGCTGCAGCAACACTGCTGTCAGGCCAGAATTCAGTAAGTTTACAGCTGAGGCC
TTATCTATAGACCATTGATTTTGCTCAAGGAAAAAGTTACACAAACTAGCAATAGAGTCCTGACCAGGCATTACAAATT
CTACACTGATGTGTAAAAGAGGGACTAGGCACAAAGAATACATGCTTAGCACAATCTATCTTTATTATAGGAAAAGCAA
TTTAAAACATATTTTACTGAGTAGTGCCAGAAAATTACCGAAAAAGAAAGTTAATGCTTTTTCCTTCTCAAAACCCTTC
TATAATGTGTAGGCATTGTCATATTAGAGAGACTCCTGGGAAATGCTTGGTCAACTAAAATTGTTAAAGAGCTAAAATT
GAACATTGACTCAGAAGCAATGTGAAATACATCTTCCCATTTCCAGGATGGAGTGCAGTGGTGAGATCTCAGCTCACTG
CAACTTCTGCCTCCTGGGTTCAAGCAATTCTCCTGCCTCAGCCTCCTGAGTAGCTAGGATTACAGGTGCCTGCCACCAT
GCCCAGCTAATTTTTTAATATTTTTAGTAGAGACGGGGTTTCGCCATGTTGGCCAGGCTGGTCTTGAACTCCTGACCTC
AGGTAATCGACCTGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCGCCCGGCTCACTGACGCTCTT
CTTAATTTCTTCTGCCTAAGAAATAGAAGGTATTCTCGAGGGAAAAAAGGCATTGACAACTAGTACAGGGAAATTGATG
ACAACATAAGGCTGTTTGAGGAAAAAACGTGGGATCTCAAAGACTGTTGGTGGGAGTGTAAATTGAATAATCTACTTTG
GAGAACAATTTGGCAGTTTCTATTAAAATTTAAAAATGCTGATATCTTATCAGTTAATCCTACTTCTAAGTATCTATTA
TTAAAAAAAATACTTGGCATGTATTCCCAATGCGTTTTGCAAGAATGTTCTTTGTAATTGTCAAAAGGTGGAAATCTGA
ATGCCCTCCAGTAGGGAAATGGCTAAATGAAATATGAAATAACCATACTATTGAATACTATGCATCAGCTAAAAATAGC
AAGAGATCTTTGTTGAGTGAAAAAATAAATTGCTGATTGATCATTAAATATAACACTATGTTTTTAAGAAGCCTCAGAA
AACAGTAATATATGATCCTATAGGCATAAAATTATTTATGATATCACACGGAGGTCTATAGAATTTATTGTCCTCTATG
GTAGCCACTAGCCACATGATGCTATTTAAGTTTAAATTAATAAAATTAAATAAAAATAAAAATTTCATGTCTCATTTCT
ACGAGCCTCATTTCACGTCCTAATAGCAACATTTGAATGGTGGCCAGTGTAATGGAGAGTGCAGATCTAGAAGAACAAA
CACAACTGGTAACAGAGTTACCTGGGGGAAGGTTGAGTTTGGGGATGGAGGGCTACAGAAACTTTAGAGTTCTGCAGAA
CTTTTAACATTTTTACAATGAGAATACATCATATATTATCTAGCTAATTTAAAACAAATACATTGTTAAAATGAAAAGC
ATGCCTAGCCAAAGGATTTCTTTCTTTTTTTTTTTTCCGAGACAGAGTCTTGCTCTGTTGCCCAGGCTGGAGTGCAGCG
GTGCAATCTCGGCTCACTGCAACCTCCGCCTCCTAGGTCCAAGAGATTCTCATGCCTCAGCCTCCCAAATAGCTGGGAT
TACAGCATGTGCCACCATGCCCAGCTAATTTTTGTATTTTAATAGAAACGGTTTTCATTGTGTTGGCCAGTTTGGTCTC
AAATTCCTGACCTCAGGTGATTGGCCCAACTTGGCCTCCCAAAGTGCTGGGATTACAAGTGTGAGCCACTGCACTGGCC
TAGCAAAAGGATTTCTAAAACAATGTAGAATTTTAGTAGATAGATCAGTATAAATTGATTTGAACACCCTACCTTTTTA
GCCTGTTAACTATCTAAAAGCATAAAAAATAGTAAAACAAACGGCAAAATCATTTCCTCCTTCCTTTTCTACCTGTGTC
TAGTGTCTATTGAACACTTACTATATTCCCAGCATTTAAAGTACAAGAATCATGAGGCAACTGCTGTTTAGACTGAAGT
GTTTTCACCAGGGGTGTATCAAGAGGATTTCTTTGTCATAGGTTGATTTCCCTTATAACTGATTGATTAAATAATTACT
AGTTGGCTTATGCAATGTTTATATAATTACAGGATATAAATGGTGGTTATTAGCCTAACTAGAATATATGCCTTTATAA
TATTGGTGTAATATTCATATGTATTTTACTACAGCTTAAAATAATAATTTCAGAAAGAAATTCAAATTGATTTTCATAA
TTTAGCAACCATTTGAGCTCTTCCAGGTCAGAATAACTTCTTGGGAAGCCCCAGAAAGAAAAGCATATACCTGCTTTTA
CAGTTATCCATAGATTGACTATAAGGCTAGGTATTGAGTTGGCGGATGCATACTTTCTTAATTCTTTAGATAATAGGTC
AATAGTGTGGTAGTGAATCTTGATGGTAAGTGTCCTTCGCATGTTTCATACTGCACAGTAGACTAGACTGAAAGTCCCA
GGAGACTGTGAGTGTAGCAAAGAATGAATCTTGTATCCCCAGATACACAAAGACCATGTCTTCACTGGACCCCACAGAAC
CTAGCACATGGTGTGTCTTATTAAATGCTTGTAGAATAATTAAATAAATTACATTCAGAAAACAGTCTATAAGTCTTAA
AGTTTACCTTTCAATTATGTAATTATTACTTTTAATTTATAATTTATTAACAGACATAGATATTCACAACACCTGCAAA
AGAGTTTATTTCAACTTCTTTTTTTTTGTCTCATCTAAAAAGTGTGGATTTAATATAGCAAAGTTTGCTTCTAGAATGGA
ATCTTTTAGAGTGTATATGCGCTTTTGAAAAAAAATGGTTTATGATTTTGTTATGTAATACTGTTATATAAGTTATTTTA
GAAATTGCATGATTTATTATAATATCAGCAGTGAATTTAAACATTACACAAATGCCTGAATATAAAGAAATAGGATCAC
CTGTGTCCAAGTTAATTGCCTTCTTTTGCTGTATTCATTAGCCATCAATACCTACATAATCTAAGGCCAAGATACATAT
GGAGCAATCTATGGACAGGCAATAGCATCCCATGGGAGCTTTGGAAATTCAGGAGCTCGAGCCTCACCCCAGATGTACT

Fig. 9.177

GAATCAGAATCTTTATGTTAGCATGGTCTCCAGGTGATTTGTAGGTCCATCAATGTTTGAAGAGCACCTGTCTGGCCTT
CAGTTGCCTTTATACATCTTCTTACCAACAGTACCATCTAGTCCAATATTTTTCTGTCCTGTTAGTTTGTCCATAGTCT
CCCAACAGGCTTCTGTCCACAAAGCTGTTATTTAGAGGCATGGCCCCATCCCTCTCATAGTCTTTGCTAAGGTTATGTC
TTTTACATTTGGAGATACACCAATTGCAGAGGAGGGTGAAATTAGCCTGAGAGCAGGACCATAACAATAACCTGATTCT
AATGGAGGCTGTTACCAGGGCAGCCAGTACCCGAACTAAGTCATCATTCTGCTGGAAGCATTCCGTTTGGCTGCAGTTC
AACAAAAAGAAAAAAGAACGCACTCCAGAAAATCAGGAAGGTTTGCATTATCTATCAGCTATGTTCAAGGAGATGTTTG
TGGAAAGTCGAGTTAAGGGTTCCTGGAAACATTAATCTCTGGACATGCTGGAGGATGCAGGTGGATTTAGAGCCAGGCG
AGTCTACATTCACAAATCACATTAACATATTAAAAGACGGAGAGCTCTTACTCTGAGGAGCCCCATTTAGTTGTATTCA
ACCCAGCTCCATATATTTTTTAAATCACAAAATGCTTTTTTTTTTTTCGTGAAACATTCATTAAAATTAGGCAAAACTC
ATCTTCGGTGAGACATGCTTTGTGAAATGTGAGTGGAGAGGTTCCTCTGAAATTGTCTAAAAGGTAACTTAAGCCCTGA
TGTTTTAGAAAATTTGACTTATTATGTAACAGTGAATATACCTATCTGTGTAGTTTCACTATTTTAGAAGTAAAACAAT
GCTTTGATTTCAAATATTAAATTAACTTAGGCATTGCTCTCCCACTCCATCTCCCAAGCTGTGACTCAGATATCAGAAC
AAATTTTTTACCTAGTTAGGGAAAAAAGTTTCCCAAGTTTCAGAGCCATAAAAGCATCAGTAAAGCACCTATTTATTGT
AGCACTCTCTTGTTTTCCATCTTCAATTTCCTAAACATTGAATATCTTGTTTTTCATTTTTCTTCTAAAAGCATTTGTG
GTATATAATAACACCGCATGAAAGTGGAAGAGACTATATTGGCTCAGGATGCACTTGATATTTGTTTTCCTTAAATGAC
AAATGAAACTCCCAATTCAACACTAGGATAAGATTTTTTTTAAGTTATTAAACCTTAGTTAAGTTATATGACTTCATAC
TGGGAAAGTGAGTTCCAGAGAAGTTTAATGAACTTGTTGAAGGTGACTTTGCTAACTTATTACAAAATGGGGAATACAA
CTCTGGTTTCCCTAATGCCTTTTGTAAAGCATCCCAGATAAAAATCTAGGTTTCAGAAGATTCCTTATAGTTAGGTATG
AAAAAATGTTATTTCTGAAAATATGATTTCCTTATGAGAAACCATTGTTTAGATATGTTTAACTTTAGAAAAAATTTCC
AACTATAATTAAAATCTATGAATTATAGACATGTTCAGTGAAATACACTGTCTCATAGAAACCATATTCAAAAAACAGA
ATGACTGGAACAGATGTTATGTATGGGGATTAGAGGGAAGTTATCCAGTTATATTATACTAATTTGAGAAAGATTCCAA
AAAAATCCTTTCTTGGGGGCCGGTCAGGGGTGGGTATAGCAAATGAAAGAGAAAGATAAGGAAATGTGTTCCTTGGTGT
TGAGTTTTGAATAGATCACTATTGTGTTATATTCCTCTGAATTTAGGATACCTGTTGGATTTTGTTCCTTATCATGTCT
GTTATGTGGACAAAGACAACAAACGTTTGTTTCTTCTTGTCAATTTCATTATGCACAAGGATTCTGAAGGTCCACCCAA
GATCTTTCGTGCACTAAATGTCTGGTGTTTGTAATACAATGAACAATTTTGGGGAGTTTGAAAATCTTTTGATTATGAC
CTTGAGGATTAGAGATCATTTGGTGTGGATGACTTCGAGGAAGTTATTTAATTTTTTTTTTGTATGTCAGTTTTCTCAG
ATTTAAAATGTGGGTAATAGTAACCACCTTGTTAGAATGATTGTAATGATCAAAACATGTAATAATGCAAAGTGCTTAT
GCTTAGTGCACTAGTGTTTTGCACTTACATCTAGTTATTTTTTTCTCAGTAATTCAATAGGCTAAGGGATGATCTAGTA
CAGATTGAGATATGGGATTTTTGTTGTTGTTGTTGTTGACAAGTTGCAGACAAAATGTTTGGTTATTCCTCTCACTGAA
ATAAAACCCAGAAATATAGGGTATTATAATATGTTAAACATTTAGTGGCTATCAAAACTTATTTTCTTCTTTGAAGTCA
GAGTAATATTTAGAGAGGGCATTCTGGGGTTTCCTTTTAGCAAAATAATTAGAAGTAATTTCCCTTAGAATTTTTAGAA
TGACTATATTAGGAGGAAAGGGAAGGTTCTTACCTAAATTGTATTGCAACTTTTCTCTGAAATAAAATAAACATGCTGT
GTTAAAATTGCTGGTATAGGCCAGGCACAGTGGCTCATACCTGTAATCCCAGCACTTTGGTAGGCCGAGGTGGGAGGAT
CACTTGAGGTCAGGAGTTTGAGACAAGTCTGACCAATGTGGTGAAACCCCTGTCTCTACTAAAAACACGAAAATTAGCCC
GGCATGGTGGTTGGTGCCTGTAATCCCAGCTACTCACTACTCAGGAGGCTGAGGCAGGAGAATCACTTGAACCCAGAAG
GTGGAGGTTGCAGTGAGCTGAGATGGCACCACTGCACTCCAGCCTGGACAACAAAGCCGGACTGTGTCTCAGAAAAAAA
AAAAAAAGAAAAAAGAAAAAAAAAAATGCCATTGTAAGTTGTGCCCTATAAAATGTTAACGTTTCTTTCAAGTGAAATAA
TGACTTACTATTTCAGCAGAGATCACTCTAACATTTAGTTTTAATCTAGGAAAAAAACCCCATATAACTAGATTTGGTC
TTTTTATTAAAATGAATTGATCTTAGAAGAGCACATCATATGCTCAAAATATAGCTGTCATGTAAATCAAGACATATAT
TTGTTTTGTTCAATGAAATCTAGAAACTCTTAAAAAAACTGTTTACTGGCTTTTGATGTTTAATTGGGTGGAATGTATA
AGAAATATCTGATGAATTTTTGACTTCTCTATTGACTTCCAAGCTTATATACAGCCAATGAACAAACTTTTCTAAGTCT
TGTACTCTCTTTCCATTTCTACACAAATTCATATTGAATAGGAAATATTGAAATAAGATCTTTAGAATCCTCCTCTTGC
AAATTATAGAACATATTAAAACCAGGTTAAACTTATTTAAATCTCTTTATATATTGTTTACCCACCTACCACGTAAATG
TTACTGATTTTTCCATAGTAAAAAGTCTAAAAATCCAATGCATCTTACCTCCCCTAAACTACCTATCTCTCCAAACCTC
TCATTATTCCTCCATATGTACCTTCTTTCAAGACTTAATTCAAGCCCTGCCTTGTTTTTGAGTTATTCTCTGTCTAGAT
AAATTATTGGTCACTCCTTTTAACCCAGAAGGCACCAATCATTTCTATTATTAATTTGATTCTTAGTATTTATTTTCTT
TGTTGGGAGTTTTATTTATATTCCCTTCTAAAGTAGATATTTTACTTTTTTGGAAATCTCTGCCTACTAGCCCAGTACC
TAATAAAAGGTCAATGATGATGATGATTTGAAAAACCATGTTCTACAGTGTTCAGATGTGCTTTTAGATAAGGGGATGA
TATAACTTTATCATCAAACTTTATAATGAAAAATAATCATGATGAAAATTTAAGATAAAATAATTTTAGAATATATTAT
TTGGCTAAGTGGAAAACTATCATGGAGTTTAATTAAAATTTCTTCATATTGAAAGAAGACAGGTATATAGAGGAGAAAA
AAACATAAAAACAAAAAACATCTCAGGAATTCCACCTTCAGCTGCCCTTACTTCAATACCATGCCTCAGAAAGAACTTC
ATGACTTGGCAGGTTTACAGGTTGACTCAGTGTATATGCTGAGAATAGCCAAGGGCAAAATTTAGTGTTAACTAGATCA
AGAACTCAGGGGACCCAGGTGTCTACTGTTTTCCATAGAAATAACCATAAACAATTTTAAATACTAGATCTGCTTTCCT
TTTGGGTTTGTATAATGTAGAGTCAAAATAGAGGCTCTGGCACCTCATAGACACAGATTTAAATCCCATTTATGCCATT
GGTAAACTATATGACCTCTGGCAAGTTATTTAACCTCCTTATGCCCTCATCTCTAAAATTGTAGTACGAAAGCAACACC
CTAAGTATGATTGCAAGGATTAAGGGAAATAAAATGCAAAGTTCCTGGTACATAATTGATATCTACTAAGTGTGAATTT
CTCTAAGTTCCTCATATCACATAATGGTAGATTTTTATTTACTGGGTGGTTATTCTGTACCAGGCACTCTCCTAAACAC
TTATATCATGGGGATTAACACATTTAATCCTTGTAGCATTCTTTTGCAATAGCTACTATCATCATCATCCTCATTATTA
TCGTCCTATTTCACAGATCTGGAACTGAGCCACTGAAAAGTAAAGTAACACTAACTAGTAACTAGTACTTCTGGGGTTC
AAAATAAACTTTTCATTTCTAAAATTAACCCATACCTTCTTATCCAGTAGACAACATAACCTCTCCCACTATCAGGTCA
TTTCCATGGCCTATATCCTGTGGACAATTTGAAAGCGATTTCCTTTTAACCCTTGTTTATCTAATTAGAACATAGTTTG

Fig. 9.178

GAGAAACATACAATGTTTTCCATAGCTGAGTATAAATCATTTTCTTCCATCCTTTTGAATTAGCCACATCATTGCTCTC
TTTCCATTGTGGGAAATCTAGCCTTGCTTGTTTGTACCTAGACAAAAGCACACTTTTTGTGTCAGAACCTGTGAAAATT
TTATCTTCCTTGTTACCACCTATAAATGATTAATGAGACAAAACATTTTCAAGGATTCCAAATAATCTAAAAAATCCCA
CAAATTTTGAAAATCCACAAAGAGGTATCTAGGAAAACTTTCATGAAGTTAAGAGATGTTATCTGCTGTTCTAGGCGTG
GGTGACTTTATCAAAACATTTCGCCCACTTTCAAATTTCCACTTGTTAAAACCTGAGGCCTTATTTGGCTGTCACTTAC
TGTACAGTGTTTTTCAGACAAGTTCCTGGCAGCTAATTTTAAAGAGATTTTGTGAAAAACACAAGCTGTGGAGTGCTCC
TGTTGGAAGAGCACCCTCTGACCCTCTGCCTTAACATAAGAAAAAATTGCCAGTCTGTCCAAACCTCACCCACCTTTGG
TTATCTTCAGAATCTTACAATTTGTGTTTCCTAAGGCAGCAATTTTCAAGCATGACTTTGAAACACTGCAGGCTTTTTC
AAGTTATTTCAAGGACTGGCCAAGAATTCTCAAAACAAAATTAATTTTGTATTTTTAAAAAGCAGTATGCATATCATGT
ATCATTTGGCAGATTTAGGAGGTTAACAGTAAGCATTAGGAAATTGAATCAATAATAATAATGGGATATGGGGACCTGT
AAAGAAACTCTCAATCCTGCTTCATTACTTTTAATGGCAAAAACTGTAATTACTTTTGCACCAACCAAATACACTGAAA
TCCTTTAACATACACCAAAGCAATGGGAGATCTGCAGAATGCTTTTGTCCATGTTTAACCATAATGATCAATGCATTTT
GAATAGAATATTGTTATATCTACTATTTAGCTTAATTGTGATCATTAACAAAGTGCCCAGACTCTCTGAACATTCTACA
TGGCATACTATTTGTGAGAAGATCAGCATGTAAATAGTTTACTCTTTGTAAGCTCTTCTACAAGGTGGCTAAAAGCAAG
AACTAGAACCCAGAGTCCCTTGCATTCAATGAATTTCCCTATATTGCCCATATCATTCTTTCTTTTCTTTCTTTCTTT
CTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTCTCTCTCTCTCTCTCTCTCT
CTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTCTTTTTCTTTTTCTTTCTTTCCTTCTTTTTGAGAT
GGAGTCTCGCTCTGTCGCCCATATCATTTTTAGTATAATCTCTTCCTTTACTTGGTCACTAAGAATCACTTTTCTCTAC
TTAGAGCCAGACATTTAAATATCTCCAGCCTCCAAGATCTCGTCTGGGTACTTGGGCTGCACTTTTTCATGTCAATCAT
TTTGCACTTGTCATCTATCCTATTAGGCTATAAGCTCCCCAAGGGCAGATATAGAGACATAGTATCAAGCTAACCTTTT
TATTTATTTATTTATTTATTTATTTATTTATTTGAGGCTGGGTCTCGCTCTGTCATGCAGTCTGGAGTGCAGTGGCAT
GATCATGGCTCAATGCTGCCTCAACCTCCCAGGCTCAAGCAATCCTCCCATCTCAGCCTCCTGAGTAGCCTGGGACTGC
AGACGCATGCCACCACACTCAGCTATTTTTTAATGTTTTATAGAGACGGGGTCTTGCTATGTTACCCAGGCTAGTCTTG
AATTCCTGAGCTCAAGTGATCTTCCTGCATTGGCCTCCCAAAGTGATGAGATTACAGGTGTGAGCCACCACACCTGGCC
AAGCTAATCTTTAAATATCCTAGAGCACCCATTATAGTGTCTGGCAAAAAATAAATGCCCATAAATGTTTGTTGAATGG
AACTGAGTCTTCAGAAACTAGAGATTTTTTCTAAAATATTTTTTTTTGCCATTTCAGTTTAATACATATTAGTTTTTCT
CACTTATCCTATCATCTGAATTTTTTATTTCTTTGAACCTGAACAGGCTTTGTGTCTACAGACTGCTGAGCCTTTAATT
TTGTTGTCGTTTGTTTTGTTTTGTTTTGCACAAAACTAAAAACATGTACAAATACATTTTTAATTGCATTTGTTCATTC
TAGTTTTTACTCGTAAAGTGCACTTCTTTCTTTTCTTTCTTTCCATTAATTTCTGAACCTTCCCTTCTTAAACTTTACC
CAGAGTTTTCTCATCATATACGCATTTCATTTTCATTGTACTTTTCTGCATCTGACTATTTCATTTTCCAGTTGTTCTG
GTATGTTTTTCTAAGTATTGTCCAATCCTTTCCATTAAGTTACAAGCTCCTTGAGGGCAAGCATTGCACACCTGTTTTG
CACAACTTCTAAGGCCGTTCAGTCCCTCAGCCCACTGTATAGAAATATAGTATATATATAGACAATACACACACACATG
CACACACATACCTTGCCACTTAATGATGTAAAGTGACAAAAACTTTTATATTGGTAAAAATTATGAGAATAAGAATAAT
CATATCCTGATTCTTCAAATTCAAATATTTGTCTAACATTTTTTGATGAAGTCATAGCACTTATGTGTCATTGAATTGT
TGTGGGCATGCTAACAGGAAAGATGGACCAAGTGGTTGACCCTGTCCTTCTGTGAATAGAACCTCAGAGTACACTTTTC
TGTAAACATTTAAAAGACAAGGAATTGGAACTTAAAATGGAGCAACCAGGGGGGCAGGGAAACAGAATAAACTTTTAAA
ATTGACCTAATAGTAATCATAGGAAACAAAAAGAATCATTCCAGTCTCCATTTTTTTTTTTCTGGATGCATTTTGTAGC
TCCCTAAGTTATTGGGTTTTTAAGAAACATAAAATATTCCTAGATCGTTAGAGATGTGATTTGATTTCAATCCCACATG
GTCTGTAGCATCACTAAGCTACTGGGAACTTCCCTATGCAAAGGTTTGAGTTTCTTTCCAATGCTGTTTAATGTCTGCA
CTTCTAGTGTCCACATAAATGAGATTTAACAGGCTTTACTTCATACTTTCTTGTTACAACATTTTTACTTTTTTTCCAA
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AGGCAATAAAGGAAATCACGAAAAGCTAGATGTATTCCACCCTCTTATAGTTGAATACATAAAATTGTATATATCACAA
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CAAATGGAAAGACTAGCCAAACAACCCAGCAGCAGGCATCTGATGGTTAAGCCCTCCCCCCAGGACTTTTTATGTACAT
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CGTGCGAGCGCGGTGCTTTCCCTCCTTGTTCATTTGCTATGCGAGCTTGTCAGTGATCTTTGGCAGGGGCTTGGGAGAG
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TGAGGCAGGCGACTGAATGCACTAACAGCAGCAGGCTCAGACCTGCTTCCCTGGACATTTCCGGGACCGTGAGCGAGGG
AACCACGTTGCCCTGGATTCTTGCCAGCTGTACAAAGTTGACCAGGAAAATGGCTCAGCAGACAAGCCCGGACACTTTA
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TGTTGCAGCATGAGAAGTCCAAGACAGCGAGGAAATCGGTTTCTCCCAAGCTCTCTCCAGTGATCTCTCCGAGAAATTC
CCCCAGGCTTCTGCGCAGAATGCTTCTCAGCAGCAACATCCCCAAACAGCGGCGTTTCACGGTGGCACATACATGGTAA
GGTTTGCGCAGACCTCGCAGAAATGGTGGCCGTTTCCCTTCAGGGAGTCCTGCTCTCGCGCCTTTAATTTTGGGGGTAG
GGAGGGAGGACCATCATCATTCCTCACCGGGGATTTATGGCCAAGTGATCTCCCTTAACCATAAATCCCACAAATGTCC
AAGTCAGGGCAAGAATCCTGGAGACTGGTACTAGGAGTGGTTGAGGTGGGTGGTTCTCAAAGTTCAATTCCTATTGCAA
GTTCCTACAAGAAAATTGGATGCCAGATGTCAAATAAGAATGCAGTTTTATTCCCATACGTACGTAGTGGCGTTTCTTT

Fig. 9.179

GATTCCTTAAACCAATTTCCCTGCCAGCTTCCCCAACAGCTGAGGAAAGAAAGGACCAGAAATGAGGGGAGGAAAATCA
TAGTTTGCTCTGTTTTCTGCATGATCCCCACTTGGACAGAGACACATACAGTGTGTGTGTAATGGTGGTGTGTCTTCAT
AAAGCCCTTCCTCACTCCTGACTTTGATATACAGTATTCATAATCTTAAACATGCCTTTCCAAAGGAAAGAAGAAAGGG
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TTTTGCCAATCTTTTTATTTTCTTTGTGAATATTTTTATCTTCTTTATAATGGGTGAATTTGTTTCATGCATATGCTTC
CATGTATTTTTCTGGAGGATTCCTCATCTTTTCCTGCTCTTGGAAAAAAAAAAAAAGAAGAAAAACCCAAATATTAAAAC
AGACCATCATGTGAGCTTATTTGGAGTATTTGGAGTTTCTGCCTGAGTAGAGGCCATTCCAAACTCTGATCAGTGAGTC
CAAGTACTAGGGTCTATGTTACACACTTAGATAATTTCAGGTAGTAGTAGGTTCTATACATTACATCTACATTTTGATA
AGATGAGTATAAATTATGATAAAGAAAACATAACAAAAAAGAATGAGTGTGTTAGTTGAGAAACTGTATGACTAAATAA
TTTTTTACAGTTTTGCCATAACTAACTAAACAGTATGTACGTTAGCAATGGGAGGGAAAAAAAAAGCAGAAACAAGGCT
TTTAGGAGGAAAGCAGCAAAAAGTAAAAGGAATTAAAACCTAAACCAGTGACAAGACCGTGCTCAGGAATGCATTGATG
TTATAGATGAAAGTCAATGACAAAGGAAATAAAAGCCATGTCACACCCAAAGACATGACCAACCTCAAAAATTTGGTTT
TAAGTAGCTAGATCTCTGACTGGGAAAGTGTTATTGTCCCCAGGATTTTAACACCTAGATGGCATTTCTGAGTTTGGTA
GATGTAATGGCCATAAGAGGAGTGAGACAAACATTGACTTTTTCTGTCTTAAAGCAGTTATTGGGAAATGATGGCTTCT
CTTTGAGGAAGATTTTCTTTTTGGAAAAAAATTGTGAGCAACAAACAGTGAATAAAAGAAAGGCATGAATAAACACTGGG
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GCCAGGACCAGAATTTCCGTGTCCAGTGTCCCTTTTGGTTGCGCTGCTTTATCACTGCAGTTCCTAAATTGCACCCATT
GCTGAATGAGTGGCCCTCAACTCAGCTGTTTGATTTCAGTCTGAGTGGAGCAACCTAGAGTTCAGCTGGAGGTTATCTG
AACTATTTAGACATGTCGGGATGTAAGGAAGGCAGGAAATCCCATGAAAATAGGCTTTCTTCTGACATTTCTGGCACTT
CCTTTTCTGGTGCTGTTTGGAAAAACTTCATGAGCACAATTTCTATCAATATTTCATTTAGTGTATCAGGTCACAGCC
CAGTAAGAAAAGCATAAAGAGAGCAATGGAAACCAGAAATAAAAATCATGGTATCGATTTTCAGTAACTCAGAAGGAAG
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CCCCAAGACGTTCATAATATCCACAGGCATCTTTTGACAAAAATCTCATTTGTGCTTTCACAGTTTGTGCTAAGCACTA
TGGAGAATTTTGAAAATATGTTTCAAATTGTTCTGACATAAATATAAATATATTTGTATCTAATTTGTTGCTAGTACAG
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TGTTTATTCTGTACCTAATTATTACAAAGTTGAGCAAGAACCATTTGTTGGTTTCCAATAATTTATACCATGGTAGAAT
AAATCAATAATATTGGAAGACATCTGTTTTAGCTAAGATAATCTTGCTGTTCTACAAAATAGTCTCCAAATCTCATTGG
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ACCTGGAATTCTACCATCCTGTGGTTCCATTATTTGCAACATGTGATTCCCAAGGTTGCCAGGCTCAGATGAATCAGGA
GAAAGACCATGAAAGAGGATGGTATGTGTGAACTTTTATGAGACAGGCCGGGAAGTGCACATGTCACTTATACTCGTTT
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ACCTCTCGTCAAACCTCCTTGATGAAGATTATACAGAAGCACTTCTGTTGTTTGATAGGGCTGTTGATTGGAAAGACCT
TGCTTCTAAACAGTAGAAGTCTCCTTCCCTGCAACTATCATCCATGGATCCAAGATCTGCTTTGGGAATCCTACAACTT
GAATTTTTGCTCCCTTCCATTATGAAGCCCTAAGGCAAGTGGCTTGGAGTAACCCACCAGAGAACCAGGGCCCTATTCA
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AGCACTTTGGGAGGCTGAGGAGGGCGGAGTCCCTGAGCTCAGGAGTTTGAGACCAGCCTGGGCAACATGGCGAAACACC
GTCTCTACTAAAAATACAAAAAATTAGCCAGGCATGGTGATGTGTGCCTGTAATCCCAGCTCCACAGGAGGCTGAGGCA
CGAGAATCACTTGAACTCAGGAGGCGGAGGTTGCAGTGAGCCATGATTGTGCCACTGCACTCCAGCCTGGGTGACAGAG
CAAGACTCTGTCACCAAAAAAAAAAAAAAAAAAAAAAGGGACTTCTCTTTTCTTAAGTAAACATCCTGTTATTTCATTTC
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GTCATTATAAGCTAGTATTTTTTTTATTATGTACTCTGTGCCCATTATTCCAGCCTTGGTCTGCATGAACCTTTAGGAT
CATGTTTAAATTTCTAGATGATTACTCTGTCAGTCATTTGTGGATGAATTAGAGTGAAGAGACAAGAGTTGAAAGAAAC
GAGTGTATGTCAGTTTTATTACTGTAGGAAAGGAGAAGGCAGAAATGAGAGATACTACTGAGGCAGAACTGTGGGGTTT
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TGTCTCTGCTTTTCACTAATCTGTTTGACTGCTTTTACTAAACATGCAATGCCTTGTAGTTCTAGTGATTATAGACATG
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GAATTTTAAGCACAGTTTTGGGGTGTAAGGCCTAAATAAGTTTTAGAAGAACAAGGTAGAAATGCTGGTTTTCAGTCTT
TGGGAACTTAAAAGTTGCTGTTTAGTCATATTTAAGTCATAAAACCTGTTATCTTCACATATTCTTTTAAAAAGTAATT
TAGCATTATAATCACTTAAGTTATAATTTTTTCATATTTTTATAATACACATCTATATATCCACGACTCAGATTTTTTT
TTATTTTTTATTTTATTATTATTATACTTTAAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTACATATGTATA
CATGTGCCATGCTGGTGTGCTGCACCCATTAACTCGTCATTTAGCATTAGGTATATCTCCTAAAGCTATCCCTACCCGC
TCCCCTGACCCCAGACTCAGATTTTTAAAATGCCAAAATTTTGTCATTGTTTGCATCAGTTCTTTTATTTTTTTAAGAA

Fig. 9.180

TAAAATGTTACAGATAATGTCTAAAGCTGTCACCCATCCTATTCTTCTTCCTTCGCAGAGGATCCTGAAATCAGTGTGT
TCTTCCTTGAATGTCATTGTCTTTTAACTTCATATGTATGTGTCCTGTTTGTGTGTTTACCATTTTATATATAGAGATG
GTACATGTATATATATCTCCATAATATGCCATACTATAAAATGAGAAAGAGCAAGCTATATATATATATATATATATAT
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AATATGTGTGTGTATATATACATATATATGCATATATGTACCTATATACATATATTATATATACCTATATGAACCTATA
TACATATATACACATATATGAACCTATATACACATATACACATAYGTACCTATATACACATATACACATATGTGTACCC
ATATACACATATACACATATGTACCTATATACACATATACACATATGTGTACCCATATACACATATACACATATGTGTA
CCCATATACACATATACACATATGTGTACCCATATACACATATACACATATGTGTACCCATATACACATATACACATAT
GTGTACCCATATACACATATACACATATGTGTACCCATATACACATATACACATATGTGTACCCATATACACATATACA
CATGTGTACCCATATACACATATACACATGTGTACCCATATACACATATACACATGTGTACCCATATACACATATATGC
ATATGTGTACCCATATACGCATATGTGTACCCATATACGCATATGTGTACCCATATACGCATATGTGTACCCATATACA
CATATACGCATATGTGTACCCATATACACATATACGCATATGTGTACCCATATACACATATACGCATATGTGTACCCAT
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TATTTGATGGTGGTCCCATAATATTATAACGGACCAGAAAAAATTCCAATCACCTAGTGAAGTCATAGCACAATGCATTA
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CATAGGAGATGACAGCTCCATGCATGTTATTGCCCCAGAAGAGCTTCCAGTGGGACAAGATATGGAGGAGGAAGATAAT
GATACTGATGATCCTGTCCTTGTGTAAGCCTAGGCTAATGTGTGTTTGTGTCTTAGTTTCTAACAAAAATATTTAGAAA
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CCTGTAAGCTGCATTCGTGGTCAGTGCCCCATACAGGTATATCATTTTTTATCTTTTATACTGTATTTTTAACTGTACC
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AGGTTTGTAGGCTAGGAGCAATAGGCTATACCATCTAGGTTTGTGTAAGTACACTCTAACATGTCTGCACAATGATGAA
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GTTTATACTCTTAAAATATTGTTACTATAGCTGTCAGTATCACACTCCAATCTAAGTGAATGTCACAATGAAAAACATT
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GTTAAGAGAAATATAAATTTGCAAGTCATAGAAGGGGAAAGAAACCATTTGTCACCTATAAAAGAGAAATACAGCCACT
TAGAGTTTGTAGAGTAAAAATACACATATACACACACAAACAACTGAGTAGATTTTCAAAGCCATTATTTAGTGATTTC
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AGTGTAATACCAGAAGGTGGGGAGCAAGTTTCTGGGGGAAATCATCTGAGAAGCACACCAGGAAGTGCTGCTGGAATGT
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GGTGGAGGCGCTGCAAGTTGAGGGTGTCTGTACCATTTGAAAGGCATAGTTGGCTTTCCACGAAATCAAAAGACCTGAG
GAAGATTTTCCTTTTAAAGAACATGCCGATTGGCTTGTCATGTTTAAGGAATTACAGGGATTACATTATGACAATTGGC
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ATCTTAAAGAGAAAAGATGTGAAGCCTGTTCGTACGAGCTGAAGCCGTTGCTACTGATGGTAAAATCTCTTCTTAAGAA
GACATGGTCTTTCTTGCAAACTTGGCAGAAATGTTGATAAGAAGAAAATAAAAACTTGAATCTTAAAGTTCATTAAAAT
AATGAAAATCATGGCTTTGATTTTTTAAAAAATATTCTTTGTGTAAATTTCTTTATAATTGAAAAGCTCCTATGTATTC
AGATAACTAAAGGAGTTTCAGCACTTTTTTTTTCTTAGATAGAAAGCTACCAAATTTGTTCTTCAAGTAGCACTTTCAG
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AAAGCTGCGATTCATTCAGTATATTGAAATCACATATTTCCAGGTCTTCTGGTCATTTGATACTTGACCTTAGTTATTC
AACCTTTTTGACTTGGAGACTCTATTAATAAGTCATATGGTTATAAAGGCATTTGGCATTTACAAGTAAAAAGTAATGA
CTAATTAAATTTACAAAGTGATAACAAACTACAGTCTATTTAAGATTAGCAATTAGAAACAAGTTCCAACTTGCTGCTG
TAAGAAAGTAAGGTAGATGCTACATGGGTAAAAACAGGAAACAGAATTATTTAATAATTCTGTGACTCATAAATAGGAT
TCAGGGCCTTCAGAATGAAGGTATTGGTGGTATTCACGTTAGGCCACCATCTGAAAGGCATAATTTTAGGTAACAGATA
GGGAAATGTATAGATCACTGTAAAGATTCTAATTTAAAATTCTCTTTTACTAGACTTCAATTTTATACCATCTTAACAC
ATCAGTCTCTTCTACTGTAAATAAGCAAAACAGAAAAATCATTTTATGTGCAGTTTTAAGGACATAAATACTCTCCAAG
TATTTCAGATGAGGCACTTATTCTCAAAAGGAGATCTTGAAAAGTTGATCTGAGAAGAAATTACATGATTTCATTTTGG
AATAAAAACACTTAGGTTCATAATAATATAGCTTTATAACCTTAGATTAATTATAACATAGACGTCAATGATTTAGCTC

Fig. 9.181

CTGCCATGTGTCAGGTACTTTGTGTACATTAACCCCTTAAAACAACCAAGGTTGGATGTAAGTATTGTTAACCGTACTT
TACATATGCAGCTGCTGAGGCCCAGAAAAAGTTCTTACATAACCAAGATCTTTCAGCTAAACAGCTATGAAACCAATAG
CATTAAAACTTGAACCCAAGTCTTCCTAACTCTCCATCGTGTGTTCTTTCTTTCAGCATTACCTTCCTTTGGGCTAAGA
ATCACATTCACATTTGTTACCCTACCCTGCATGTGTATTGAAGTTATAACAATGAATATTCAAAGATTTTACAAAATAG
TAGTTAACAGAAAGGTAGAGACAGAGCCCTTTTTTGGTGTGGAATCTCAGTTTATTAGTTTACACATGTGGCTTGTATA
GAAGTTGACATCCTTATAAAATATTCTTATAAAAATATGTGTGTGTAGGAGAAATATATGTCCTTGGTGAAAAGGGGTC
AATGGAGAACATTTGATTCAGGGTTGTTTTTACATAAGAGGTGTAAAAACAAAGCCAGCCAGAGAATAATTTTATAGTC
AATCATTCAGGGAAAGAAAAAAGTCTTGAGCTCTAAGGAGAAAGATCAAGTCAGAAATCTGTTAAGGTTTGACTCTGGA
AGAGCCAGCTGGGAATGATGGCCGGCTAGTTCAAGTCACTAAGCAACAGAACAGCAAACTGCTTGGTAACAAGATCTGG
CCTGACTCACAGGCTCTCTTTGAGTGACCTAGGTGGCCAGATAGAGGAGGACCAAGACCCATCTTACCTCAAAACAATA
TCCTTCCATTTCCACTTTGCCAGCCTTCATGCCAAATTCCACATTATAGAATAGTCTCTTTGACTTGAGATATTTCCTT
TTAGAATGGAAATATCTCTGGGACTAGAAGCTAATATTGTTGTCTTTCTTCTCAGAAATAGTGTTTCAGAGATTGTTTT
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TGTAGCTGGACTGTAAGTTCCTAAAAAGTAAGAACCGGCCGGGTGCGGTAGTTCATGCCTGTAATCCCAGCACTTTGGG
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AAATATAAAAATTAGCTGGGCATGGTGGTGCATGCCTGTAATCCGAGCTACTCGGGAGGCTGAGGCAGGAGAATCGCTG
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AAAAAAAGTAAGAACCTCCACATTCATCAATCATTGTATCCACTGTGAAGGTACAAGTGCCACCTGTATAATATACATT
CAATAAATAGTTGTTTTTTGATCGATTGAGAAACATACCTTCTGTTGCTGTGTCTTTTATGCTGAACACCCAGGGGGAT
CCATACCCTTCCAGACTAGAAGTCCTGGTGATGTTGGTTTTGATTGCCATAGTGGAAAAAAACTTTGAACTCAATGATT
AACCATTTGTGTGGACTTTGTCACCATGACTCAGTGTGTGTCTCTGTGTGTGTGTGTGTGTGTGTGTGTGTATGTTTTG
GGTTTACATGCACATAGATTGGTATAGTTGGCTTTGGTGTATATGAATGATTCTGTATCTTATTATTCTGTCACAATAA
TTTGTCAAATACATGCATTTTAATATTTAGCTTATACTTTGAAAATTATTTATGCCTGTTATATTTCTGAAAAAAATCT
GTGTAAATGTATCTATGATTCTTGGGAAATTACTGAATAACTAGCTTGTTAAATTCTGATGACTAATCCTTATCTTTTA
GAATTCATAACAGTTAAATTATATATCAAGACCTAAGCTTACAAAAGAAATGTCAAGATTTTGAGAAATTTGCAAAAAA
AAACCCTTCATAGTTTCATTTTCAGTGTTTTAATTTGGAGAAATTTTAACTGGCAGAAATTAAGTACCATTTTTCCAAA
GTAGATCTTCAGAAGAACTAAAATAATAGAAAACCTTTTTGAAGGGGTTTAGCATAGAAATATTATTTTAATATAAATA
TTTTTATACAGTTAAATATTATATATATCATTTTTAAATTGCAGTAATTTGAGACCAATTTTTCCCCATTACCCTTTTG
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CTTTATTTTGTGCAGTGTGATTTTTTTTATGACCTTCTATTGAGTGATTGCCAAATAGAACAGCGTATGATTTATGGAT
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AGGCTTCCTTTAATAAAGCCTTCTTACTAATAAGAATAGCAGTTTCACTAACACATTGATCATTCTTGAATCACCTTCA
CAATTTTAGGTGCAACTGTGGGCCATTTATACTGTTTACATTTAATATTTCTAGTAGACTTACATTTTTATTTAAAAGG
CCATATGTTTAAAAATAAAGCTTTGTATATTACTGTAATTTGGAACTAGCGTCATTTATTATGCATAGAAGATAATTGA
AAAAATATACAATAAACAAGGCAAAATAGATTCAAGTTTAGCTAGATAACCATGACCTTCCAAAGACTCTGAGCCTGAG
GTCTGTTCTCTGTTTAAAATGGCATTTAGCAAATAATATAGACATATGAAAGACCACAATTAAGTCTTTCTTCTTAAGG
TAATAAGAATTACTGAAAGGGATTTGGAAAGGAAATAAGCTTCTCCTTATTTAATTCAACATTTTAAAATTCAATAAGC
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GATTGGGTGATGCTAATCCCTAAGCAGAAAGTATGTTGGTACTCTGTTTTCCCACACTGTAATTATTAAGTTCTTACCT
GGTAGCTGCACAGATGCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATGTTCTGTGGAAAATTCTGTACCTGCCAATGGT
AGATTCCAAGTTTTACTTCCAAAGAGTGTAAACATGGGTGTTTTAAAAAGTATGTCTCAATGCAAATAAATGAGAGCTA
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AGCACTGGCTACGTAATTTGTAGGGCCCAGGTAAAGTGAAAATACAGGGCCCGTTACGCAAATAAATATTACAAATTTC
ATGATGGCAACAGCACTGCATTCAATCCAGCACAAGGCCCTTCTGAGAGTAGGATCCTGTATAACTTCATAGGTCACAC
CTGTGAAGCCAGCCCTGCACCCACAATAGGTCTGATGTGATGCCCAGAAAGTCGACTTTGTAAGCCCTACAGGTGATGT
GGAAGCCATACGTTGAGAAACTGTCTTAAAGGGACATCTTTTTAGACAGTCTCACTCTGTTGCCCAGGCTGGAGTGCAG
TGGCACGATCTCAGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGCAATTCTCCTGCCTCAGCCTCCTGAGTAGCTAGG
ATTACAGGCATGCAACACCATACCCGCCTAATTTTTATATTTTTGGTAGAGAGGGGGTTTCACCATGTTTGCCAGGCTG
GTCTCGAACTCCTGACCTCAAGAGATCTGCCTGTCTCAGCCTCCCAAAGTACTGGGATTACAGGCATGAGCCACTGTAC
CTGGCCTTAAAAGAACATCTTTATTCATAAGCTCCTCATTTTACACTGTTGATAGAAACTTCAGAAGACAATGATATGC
GTTGAAGTAAAAAAACAGAAGTTCCAAGAAAAGTCAGAGTTGGACCAGCTATAAATTAAAGAGAAACATTATCTTACAT
TCATCTTGAGAGTTTTCTTTGCAAATGAACACGTACATATACACAAACAAACTTAAAGCAGCATTGCCTTTGCATTTAAAG
TCACTTACTGATATGCACAGTATTAGTCATGGCAAAATATTATTAGCATTTGAAATTGATGCTCATCCCTCTTTGTTGA
TACTGTCTCATTTACTGGATTAACTTTATTCATATGAGATCTCCCTTTTCTTTTCATTGTCTCTGTTTCCAGCACCTTA
ATTGAAAGTACCCCCGGTTACATAATTATTCCTTTGACCTTATTCAGTATGTTCCCTGCACCACAAGTGTCTCTCCTCT
GTTCAATTCCAACTGTCAGCTCTTTTAATAAACCCTACTCTTAAACCTCATTTCCCAGGCTCAAGTTCCATATGCCTCC

Fig. 9.182

TCTGGACATTTCCACGTGGAAGATCCACTCTTAATTTATATTTAACACGCACAAAACCAAGCTTACTGTGCCCCCCTTT
TTGATTTTTCTACTTCTGTTTATCTGGCCATTATCTTCCCAAAAAACCAGAAAAAATCATATTTGACTTCTGCCTTGCC
CTCCTTCTGCCTAGGCCTATGGATTATTTCACCTATTATCTCTTGCTGTTCTGTTCCCTCCCAATACCACCAGGTATTT
TAATACTTAGATTTGTGTTTGATCTATTTCAATAACATTCTAACTTGTCTTTGTGCCACTAGCTCCTTCCCACTAAGGA
TGTCCTACTTATACTGTCTCATTAATTACCCTACAGTTCTGCTTTGATTGTCCACTATCTATAGCAGAGGTGAACAAAA
GGACCAGAAAATAAATATTTTAGGCTTTGCGGACCCTATGGTCTCTGGGGCAACTATTCAACCCTACCACGGTAGTGCA
AAAGAAGCCCAGATATACAAATGGACATTAGCATGTTCCAATAAAACTGTATTTGCAAAAACAAATAGGCTGAATTTCG
CCCACTGGCCGTAATTTGCCGATCCCTGCCCTGTAGGATAAAGTTCACACCTTTAACATGGCATCTAAGCATCTGTCAT
CAGTTCTGCACCTATCTCTGCAACCCTATGTGTTATTGTGTCCTATGGATACTTCACATCCTTCGTTTTGAAGCCGAAT
CTAGAGCAGGGTTGCTCAACCTCAGCAGAACTGATGACTGGGCCAGAATGATGCTTTGTGGTGGGGGCTCTCCTGTGCA
TTGTAGGAGGTTAAGAACATCCCTGGCCACTGCCCACTAGATGACATTAATTTCCACCATGAGGTGAAAATTCAAAATG
TCTCCAAGCACTGCCAGTTTTCCCTTGTAGGGGACGAGGGATTGTTTTCAGTTAAGAACTACTGCCCTAGGGAGTAAAT
TTTGTGAAGGGGAGAACCAGTTCTACCTCATTCACAGGTGTATCCCTAGCACCTAGCACAGTCTTGTGATATACAAAGA
GGTTCAGGAATCTATTGCATAGTCCAACTCTGCTACTCACTGTGGGATCCTAGGGTTATTTAAATTCCACAAATCACAA
TTAAGTTCATCTGTAAGTGGAACTATTACTAATTCATACATGTTTCATAAAATTATTTAGAAGTTCAAATGATATATTT
AACAAAAAGACCTCTTGAAAGACAGTAGTACTTTCAAATAAAAGGTAAACATACAATTGATAGAACACTGAAGGTGATC
TGAGCCTATTGAAATCTAGAAGCTTAATTTGACTCACATACTCTGTCTACACTGTACAAATTACTATATGGGATGTTAT
TGGGGCATTGTCTTTGTTCTCAAGGATTATGACCTAACAGGTGTTAGAATATGATTACTCAACCATAAAACAATAGTTG
CCATAACTAAGCATAAAGAGTGGTTGGAATTTATGGGAGGGAGACATTGTATCTGGTACTAGGAATCACTTAAGACCTC
ATGAGTGAGATGAAATAGTCACAGAGAAGTCCCAGGCACCCTACTGAGCATTGTCTTAGATGATCTCATTGAATATTCA
CTGCAACTTGATTAGGTTTAGGTTTTATTATCACATTTCACAAAGAGAGAGGGGCCTAGGAAGGAATTTGATATGAATG
TGAAGCATGGGAGATTTCAGCAGGGAGAGAACTGCAGTGAAGTGTGGAAGGAGGGGAAGTGACAGGAGGTGTTTTCTCA
CCAAGGGAATAGTGTGAACAAATATGGGGATTACATGGGGTTTAGGTGAGTTTGAGTGCCTCTAGGGAAGGTAGGTTGG
AATCAGATTTTGAAGGATTGCTAACATCTCTCTCTCTCTTGCTCTCGCTTGCTCGCTCGCTCGCTCTCACATCACACAC
ACACACACACACACACACACACACACACACACACACCAGGGATTTATATGTATAAAAGAAACATGATGATGTTATCTTTCC
TAACAGCTTCACTCCACATAACAGGAAGTGACATTTTGAGTTCTTACCCCATGCTAAGCTTGCTAAGCCACAAGTATGT
GCACTGAACACTTTCAATAGTTGGACTTTGAGACTCAGTTCAATTAGACCAATCTATACCATCTTTCAGCTAGCTACTG
CTCTTCTACTTTTCCCAAGATAATCCTTCTGAAATAGATACACAATGCTGTTTTCATTCAAATCAGATGTGTTAATTCT
ACTAGTGGCACTTGTGTTCTGATGCATAGAACAGAGGCATTATTTACGTGAGGACTGTGCCTTCCTTCTTACTGAATTG
CAAAAGTATACAATTCTTAGAACACATCTAGCAGTTCTGAGGGGCTGGACACAGAAAACCATCTTACTCTGAAGGTAAT
TTTCTCTATTTTATCACTAGCTCACCAAGGTGAGAGTCAGGAGTGAAATATCCTATTTTCTTTTCATCCATTCAAAAAA
TAGTTTGAGTGTTTCCTGTGTACCTATTGTTCTTCTGGAGATAGAGAACTGAATGAAATAGACAGTCTTCCATACATTG
GGGCATACTTTTTTTTTTTTTTTTTTTTTTTTGAGACAGGGTCTTACTCTTTTGTCCAGGCCGCCTAGAGTAAAGTGGCA
TGATCACTGCTCACCTAAGCCTTGACCTCTTGGGCTCTGGGTTCAAGAGGCCTCCCACCTCAACCTCTCAGGTAGCTGG
GACTACAGGCACATGCTACCAGGCCTAGATAACTTTTTATTTTTTGTAGGGATGGGGGTCTCACTATGTTGCCCAGGCT
GGTCTCAAACTTCTGGGCTCAAGCCATTCTCCAGCCTCGGCCTTCCAAAGTGCTGGGATTATAGGCATGAGCCACTGCA
TCAGGCTAAAGAGCACATATTCTAATAAAGGAGAAGACAACACACAAATAAATATTCCAGTGGGTCAGAGAAAGACAAG
TACAGTATAGAAGAATAAGTCAGGGTAAGGAGTTACAGAGTTGTATGTAAGACATTTCAGCAGAGATCTGAAAGAGATG
ACTGAACGAGCTATATGATTATCCAGCAGAAGTACATTTCATTGTGATTTCAAGTACGCCAAATGTGGTTGGCGTATTT
GAGGGAGGGGGGAAGTTATAGAAAATGAGGTAGGAGCCACAGAAAGGCATCAGATCACATAGTGCTTTGAGCCTGTAGT
AAAGACTTGGGTCATTCCTTGGTGATGACTGTGATGTATTGAAGCAAAAAGTGTTAGTAGTAGGAATGTCTGTGTTAGG
AAGGGACACAGTCTATCATAAGTTTTGGAAGAATCATCCCGGCTCCTGTGTAGAAAGTAAAGATGTGGGGAAAATGGAA
GCAGAGACCAGTTAAACTATTGAAGTAACCCAGGTAACATGTATTGGCAGTGTGGACTAGAGAAATAGAGGTAAAAGTA
GTTAAAAAAAAAAAAAAAAAAAAGGTCATAATTCTGTCTACCATTTGAAGACACAGCCAACAGAATTTGTGGATGCATT
GGATGTGAAGAGTGAGAAAGAAGAATCAAGAATAACTCTTAAGTTTGTGGACTTAGCAACAGGTAGAATGTAGTTGTCA
TTTGTCAAGCTGAGGAAGATTGTGGAAGGAGCATTTTTAGGGGAGGTGGATCAGGAGTTTAGTTTTAAAAAATTTATTT
TGGGGATGCCTCTTAGATTTCTGCATGGAGGTTTCACTTAGATAACTGAATGTATGAGTCTGAAGTTTGGAGCACAGAT
TAGCACTTGAGATGAACACTTGAGAGTTATTAAAATGTAGGTGGTATTAAAAGTGATAAGTCTGAATGAATCACCCAGG
GAGCAAGTATATATAGAGAAAAGACCTGAGACAGTTGGGGCACTTTAAAATCTAGAAATCAGGAAAATGAGGAAAACTC
AGCAGAGAGGCCAGTGAGGTTGAAGAAAAATTGAGAGTGATATCTGGAGGCCAAATGAACAAACTGTTTCAGGAGAAAT
AAGTGGCTGGGCATGGTGGCTCACGGCTGTAATCCCAGCACTTTGGGCGGATCCCCTGAGGTCAGGAGTTTGAGACCAG
CCTGGCCAACATGGCAAAACCTCATCTCAAATAAAATTACAAAAATCAGCCAGGCGTGGTGGCAGGCACCTGTGATCCC
AGCTACTGGGGAGTCTGAGGCAGGAGAATCATCACTTGAACCCAGGAGGCAGAGGTTGCAATGAACTGAGATCATGCCA
CTGCACTCCAGCCTGGGTGACAGAGCAAGACTCTGTCTCAAAAACAAAGAAACAACAACAACAGAAAAGTGATAAACTG
TGGCAGATGCTGCTCATAGGTCAACTAAAATAAGAACTGAGAATTGATCATTGCATTGGCAACATGCAGCCAATTGGTG
GCATACAACACAAGTCGATCAGTAGAGTAGTGATGATACAGGACTGACTAGAGTGGAATATAACAAATTTCCCCAATGC
TTAAACCAACAAGCATTTATTATTGCATACAGTTTCTGAGAAATCAGGGAGCAGCTTAGCTGGCTGGTTCTGACTAAAG
TTCCTAGAAGAAATTGCACTCAAGTTGTCAGTGAAGGCTATAGTCATCTGAAGCTGTATCTGGGACTGGAAGATCAGTT
TTCTAAGATGGTGCTGTCCGCAGGCAGCCTTGCTTTACACTGGCTGTTGGCAGAAGACTTCAGTTCCTCACTGTTTGTG
CTTCTCCAAAGGGCTGGGTGTTCTTTTTTTTTGTTGTTGTTTTAATACTTTAAGTTCTAGGGAACATGTGCACAGCGTGC
AGGTTTGTTACATATGTATACATGTGCCATGTTGGTGTGCTGCACCCATTATTAACTCGTCATTTACATTAGGTATATC

Fig. 9.183

TCCTAATGCTATCCCTCTCCCCTCCCCCCACCCCACAATAGGCCCCGGTGTGTGATGTCCCCCTTCCTGTGTCCAAGTG
TTCTCATTGTTCAATTCCCACCTACAAGTGAGAACATGTGATATTTGGTTTTTTGTCCTTGCGATAGTTTGCTGAGAAT
GATGGTTTCCAGCTTCATCCATGTCCCTACAAAGCACGTGAACTCATCCTTTTTTATGGCTGCATAGTATTTCATGGTG
TATATGTGCCACATTTTCTTAATCCAGTCTATCATTGTTGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATA
GTGCTGCAATAAACATACATGTGCATGTGTCTTTATAGCAGCATGATTTATAATCCTTTGGGTATGTACCCAGTAATGG
GATGGCTGGGTGTTCCTACCTCAGGCACAGGAGTCAGTGATTCAAGAGAGTGCAAAGTAGAAGCCACAACGACTTTTAT
GACCCAGACTTGGCAGCAACACACTATTACTCTGCCATATTCTTCTGCTCACATGTGCCAACCCTGGTACAGTGTGAGA
GAGGACTACTCAAAGTTGTGAGTATCTGGAGGTGAAGGCCTCCTTATAAAAGGACTAAGTCAAGTGGATTCAAGAGATG
ATGGGAAAAGAAGTGGTGGCAATTGTTAACTCTTGGAGTTTTGTTGTAAAGTCAGTTGGAGGGGATAGGAAGAAAAATG
AGATATGGGCAAAGGGTGTGTTGTCAATTGTATTATGTTTGTGTGGTTTTGAGAAAGAAGCAGCAGAAAGGGGACATTT
GATCATGAGAAACTGGGGACAATTGCAGGAGCAATATTCTTGAGGAGGCTTTGGGGGAATAGGGGTAAGGAGAAGTTCA
GATAGTGCACAAGCCAAGGAGTTGCCCTTAATGGGAGTGCTGATTGTTCAGTCCTCACAATAAATGAGAAAGAAGAGTA
GGACAGTCTGAGAGTATAGGAGGTCAGTATCTTGATAGATCTGGTTTCAGAGTGTATGAAAAGTGTCTCTTAATTCCTT
CTATTTTGTGATAAAATAATAAGCTCATCAATGTAAAGACAGAGAACAGATGTTGGAGGTTTGAGGAGAGAGAAGGTGA
GAAATGATCCATCATCTCTGGGAGGAGAGAGTGCTTTGTCTAGAGAAATGTGAAATTCCCAGACGGCACTAAGGAGCCA
CCTCAGGCCAGTAGTTACAAATTCAAAGTCATCATGGTTGTGTTTTTCCTCAACTATCATTGACTGCTTAGGCCACAAC
AAGCACGGTTTGAAAAAGGTTGGTTTAACAGAGATGAGATATTTCAGTGAAGTCTGAGTTTTAAAAGGATATGCAAAGA
AGTGATTATGCTGCCATATTTACTCTAAGCTCACTAAGGAAAAGGGGACATAAGTTTGGTGAGGGTCAGAACAACTTCT
AAGGTCAATGCACTGGAGGACTCATTGGGTTTGGAAGATTTTTGGAGTCAGAATACTGGAGGGGATGAGCTAGAAAGAG
AGAAGGTAGGGAGAGACGCTTAACAGTGGTTATGGGGCACCGTTATCTGTCATGGCAAGGCCTTGCTTATGGTAAGGAA
AGGAGGTTTCAGGTAAGATTATCTGAAGGGAGATCCAGAAACTGGGAGACCGTGGGAGGAAAAGATAATTATGAGTTAT
GTAAGAGTTTGCGCTGGAGAGAGACAGGGCTAAAATGTTTAAAGACTGAGAGGAGAGACCTTTAGGTCAGTAGAAAACT
GGATTAGGAGGGGAGCAGATTAATGATGTGAGTTACAAAGACATTTTAGGGCAAGGAAGAGATCATGGTCTGGAAGCAG
CAGAGAAGAATGAGAAAGACTCCTACTTCACTAGGGGCAGAGGTACAAACATGTGGAAGGAAAAATAGCCACTGCATCA
GAGGGCTGAAGTAAATCCGTATTCTCGGTGGGCAGCCAGTAGTGTCAGAGCAAGATGGTGCAGGAAAGTCAGAGAACAT
GCTGAAGATACAGGAGCATAAGGAGATTTTGCTGATGACAGACTGAACGCTAGGAGTCACGCTGGCGAGTTTGCAGGAA
TTGGGGAAGGCTGGGGATTTCAAAGTAGGGGATTTACAGAGCCATCTGGTGATGAGCAATGACCTGGCAGTCTTGGACT
TTGTGTGGTGACGGTTGTGTATTCAAGACAAGGACCTTGGTTTTAAGACCATGTAGTCAGACAAGCACAAACTCCTCTG
CTGGGATGGCCGGTTTCTTTGGTCTATTTAATTAGTTCCAGAAACAGTAATTCATCCTCACTGCATTTATAGAAATTGA
GGGGAGAGGTGGTGGGTACCAGACTGGCCAGGTCTGCCCAGTCATCTTCACTTCAACATTCCTGTCTGGTAAAGTCATA
TTATTCTCACATCTTGGCCGTGTGTGTATGCTCCAAGAATGAGACAGATGACAGAAGATACAGAAAAACAATTGGGAAA
TTGCTAGTTTGCAGATGTATAGCCCTGGCACAGATTTTCTAATATGAAATTGCCATTTTTTCCATGATTTGGACACAAA
ATCCTGTTCTTGAATATGATGTTCAGCCTAGATATTGAAGAACTGAAAAATATTTTTGAAAAAATATATATATTGCATT
TGTCACAACAGTTTATACACATAATTATCACAATGATATTGCTTTTCTTAAATAAATAGGTTTTATGTGTTGGCATGAA
ATACTTTTACAAGATGATGCCAGGTTTTAACATTTATACAGGAATATTTTCATTATCATAATTGTTAATAAAACAAATA
TGAAATGTATAGCTTTCTCTTTGGAGTTTGAATTGTTGGTTCTTACTGCCTGCTTGCATATTTATATTAGTTGTACTGG
CTGGCAGTTATTAGGAAATACGATCTTCTGTGTCTTAGGAGTGCGCCCTGCAAGCAACATGTGCAAACATTTTTTTCTT
TCTTTCTTTTTTTTTGCCCTAAGGAAAAGGGTAAGCTCTGGCACCTTTTAACCTGTAAGGATTATGTGGCTCTTGCTGT
GATTGATTGGTTGGCTTCTCCTCAAGAAATGCTCCTGGTGCGTATTTTATGTTCTCACAGAGCCAGGGCTTTGCTGATC
AGCACGTCACCCCTGTCAAGACGTGGGCTTGCTTTTGTGCATTTGCTCTTGCAGCCTGGGAAGCATATTTCAACACACT
GTCCAGAATTGGCTAGAACATGCCTGTCACTCCCAGCTGACTCTGATGACGCTCTTGCCAACGTAGATTTACATCAACA
CAGTTCTTTACTGGAAAAAGCTCATTCAGAATATACAGGGTGGCCCATTTAAAAGAGGCATAGCGTCAATTTGAAGAGA
AATATATTTTAAAGGGAGAACTCTAAGAAATACACAGTCAATTGAAGGCTCCATGGAGCATAGAATTATAACTAGCATC
ACCCGAGAATTTTTCCCCTGGAGATTGTCCTAAGCTCTAACTTCTAGAGACTGGCTTATCCTGAAAAGAGAACCTTTCT
GTTCTAGACTTTTTCTTTCAGCATGCTAGATATGTAGGCATTTTTAGCCTCTTCTTTCCCTAACCATATAATCTGAACA
CCATATTCATTGAAGAAAGCATGAGATGTGAAAGCTGATAAGATGCAGGATTATGTGACACCATTGCTTTTTACCTGTG
CAAAATTCAGTTTGGTAATCAATGGAAATACAGATTTTACCCTTCACATAAAATTGTTTGGCATATGTCCATCTTGTTT
TTTGACTCATCCTTGATATCACAATGAATGTTTGGGATAGGCATATTACTCAGATGTGTGGGTCTATAGACAGGAAATC
AGGCATTCAGAAATAAAGCTTGTTACCATAGCTATCCAGGAAAAAAATACAACACTGTCTTTGCTGTACAAAAGAAAAA
TTCAATACTACTGTCACATGATATGTGATTACTATTATTATGACCCAATGCTACTCACCCTTCATTTTCATCATTCTAG
TCTATTTCAGGTCATTACAGTAATGGATACAACTGAATGGGTTTGTAATTTTACCCCTTCTCTCATGACAACCAGCAGG
ATTCTCAATGACACATGCTTTGATCTGTCTGCTTTTAAATCTCTTAAGCAGGGTGGCTCTAGATAGCTTCCTCTCAGAA
GATTTTATGATTCTAATAGACCTCATGATGAGTTCTATATTTGTGCTTGTTTAGATACATCAAAGTCAGGCTTTATACT
AGGGCCACCTGGAAAGTTAAGGTCATCAGCTTTTTGTTATAGTCATTGGATTACTGTGATGCTCAGCAATAACAAAGTT
TGACCTTGTAAAGTGATCAAAAGTTGTGGGTTACAATATAGGAATATTAAAGTATATTCTGCCATGATGTGTCTTCTGT
TGTAGTTTGTCTAGAATTAATATTACAGTCACAATTAACTCCAAAGTGTTCTATACTGCTTGCATACAGTACAGTGGGA
AAGAAGAGATGTCAAAATCAGAGAAATAAGATTCCTCCATTATGAATTAACATACAAAATCTACACTTAATGCATCAGA
ACTAAGATGCAATGTTTTAAAGAGATTGAGTTGACAGGTCAATCAGATGGTAGGACTGGTAAGAATTTGAGCAGGCATA
AACAATTGGCAGTATGTATTCAAACACTGTTTATGAGAGTGAGGAACTATTGGTTAACAAGCTGACATTAAGCATTTAG
ATTATATAAATCACCTTATTAACTGCATTCTATCTATGGATCTATTATCGATCTGTATCTATCTATCGATCTGTCTGTC
ATCTTTTGTTTTGTCTGGTTCCATGCTTCCAAAGACATTTTCTGATCTTCATTGTTACATAGTACTCTCTACTGAGTCC

Fig. 9.184

TAAAGAACACAGTTCTGTGTCAGGCTGATTGAAGTGTAATGATTTGAGTGATGATTGTAGTGCTCAATGAAAGGAAATA
AAGAATATTTGGACTCTGTTCAGCAGTCATATGGGCTTGTACAATATGAGTCTGCTTTTGAGAGAAGAAACTTGCACAA
ATGTCTCTTTAAGAGCCTGCTTTTAATTCTTTTGGGATATATATCTAAGTGTGTCTTAAGATAGTTCTATTTTTAATAT
ATTTTTTCATACTGTTTCCATAGTGGTTGCACCATTTTACAATCCTATCAACAGTGCACGAGGGTTCAATTTCTCCAT
ATTCTTGTCAACACTTACGTGTGTGTGTGTGTTTACAGTAGCTATCCTAATGGGCATGAAATTATATCTTATTGAGGTT
TTGATTTGTATCTCTCTATTAGTAATGTTGAGCAGCTTTTCATGTACTTGTTGGCCATCTGTATATCATCTTTGAAGAA
ATGTCTGTTCAAGTTATGTACTCATTTTTTGGTGGAGTTATTTAATCTTTTGTTTCTAAAATGTTTTGAATAGATCAAG
GTTTAACAGTCATTCCTCTGTGTGCTTTTATGTCATGTTTAGAAATGTGACTCCATTTTAAGCTTCTTAAATCTTTTTT
TACTTTACCATTTTTTGGGGGCTCTCTTTTTTTATATTTAACTTTTGTCTATCTGTAATGTGTTTTGATTATGAAGAAT
AAGGAAAAAATTTAGGGTTTGTTTAGCTTCCCAAACCCCACTTTATAGAATAATCACTGATCATGTACTAACTTATAAT
ACTTGATCATTTTAAGTAGGCTTTGTTATTGAGTTCCACATTTGGCACACCTACTGGTGTAATGATTGCTCTAGTATTA
GTGCAATAGTATCGTGTTAGATTTTGTTTGCAGTGTGCTAAGTGGTAAACCTCAGCTATTAATCTACCTTGACTAAATA
TGTAATTGTTCCCTTTATTAAGCCCTATTTTCTTTCAAAATAAATATTAACTATGTTTCCCACTCATTCTTTTTTGGGG
GAAGAGTAAATATAAAGAAATGTTTCCAGCAATGTGGGAGGCCAATGTGAAAGAATACTTCTATATTATAGAATGACTA
TTTTTGCAAATGCAAAATGATAACAGAATTCCCAGATAAGGAATAGCAATGACTGTTTCAGGGCATTACCTAAGTGTGT
TTCTTGGGCTAAATTTAGAATGCCTGATTACTGCACACCTGGTATGAAAATAGAAAACCCTTGTGCCTACATCACATAA
TGCTTACCACATTGAGGTACAGATAAAAGAAGTTCTAGAATTAGGGTTGTTCAAAGCCTGGTTTACTATATTTTGGATA
TAAAATGGAGTAAATCTCATAATCCTTCTGAACATTGGTTTTCTCACTTGCTAAATAGGAATAAATAACATGCATGAAT
AGTATAGAATGGTTGTCCATGTGTCTAAACATGATAATTTGTGGGGTATGTACTTTATAAATGATTATATGCAAAAAGG
ATGGCCAGACGCAGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCAGGTGGATCACCTGAGGTCAGGAG
TTTGAGACCAGCCTGACCAACATGGTGAAACCCCGTCTCTACTAAAAGTATAAAAATTCACCAAATATGGTAGTGCATG
CCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAAAATTGCTTGAACCTGGGAGGTGGAGGTTGCAGTGAGCCGAGA
CTGCGCCATTGCACTCCAGCCTGGGCGACAAGAGCAAAACTCCATCCACACCCTACCCTCCCCCAAAAGAAGATGATG
ATGATGATGATGATGATAATTGATATCAGTAACAACAACAGTAATACTGGTGATAGAAGATCCTTCTGGTGCAAACCAT
TCTCAACAATATGTTTGCTCCAGAGAAGGTAGGGCCAGACTCCTAATCCCAATGTTGTTTAAAAGCCCATTCAGATTAT
GAATTCATTTGAAGCATTTTAGGACCCGAGAGACTACTAGAAGTTTACCGTTAAACTTAGATGACATACAGTTAGAAAA
ATTTTCCATAGTCAGCTTTTTCTTCTCCTGTTATCTTCTGTATTTTACTAAGAGAATGTTTAGTTTTAACTACTAGAAA
AACGTAATTTCAGGTTGATTAAAAGAGAAGAACCTAGATATGTAAATAAAGATGAATCTTTTAGACATGTAGTCAGTAG
CTTTCATGTTACTAATGAAAAGTTCTTCATATCCTATGATTTGAAAGAGGAAAATCAAGTTTTGTGGAAGAAAATACGT
GAAATTTTAAATAAATATACGGCAACTTTATATAGCCAGAGTTAATTCTTCTTTTTCAGTAAATTGTATTACCCTGAAA
CACCAAAATGTCAATAGTACAATTATGGTCATATTGAGAGCACTTGTTATTAGACACACCCTTTAGATTTTTTTCTTTT
GAATAGAAACTGCAAGAATTTTTAAAAACTGGGCTTATTGACTGGACGAAGGGTTTTAAAAAGAACAGAAAGACAAGGC
AGGGCAAATCCTGGTGTATTTCACCTGCGTAGTGACATATAGGAAGAAGGGACCTTTCAGAGATCATCTTGAGTTTTGA
CTAGATGATAAAACTGAGGTTCAGGATGGCACAGAAAAGTGTCCAAGGTCACACATTTAGGAAAATGTGGGACATAGAC
ACAAATTGTTTGATGTAGTTCAGTAGTCTTTTTAGTCTGACCCAGAGCCTTTGGGGATGGGGACGGAAGGAGATTGGGA
AGAGCTTGTCATTGATTCAGTATCTCTGCTCAGTGCCCTCTTGAGGTTTTTGTTTGTTTGTTTTGTTTTTGTCTTTCTG
GTATTTTTCTGTTGTTTTGATCCTGGATTTGGAGTACAAAGAGACTAAACCATTTTCCATATTGCATACCTGACTTTGA
CTTACACTAGGTGCATTGAATGCAAGAAGCAGTTATGTAGAAATGAATTAATAGATAAATTTACTGTAAATCTAGACCT
TTATTGTTGTTCCTCCTATGCTACTAGTTAGCTGAGTGATCACAGGCAAATTACTTAAATCCTCATAGGCTCAGTTTCC
TCTAATTTAAAAGGAGAGTGTTGGGTAGTTGATCTCTAAAGTCCTCTTCAGTGCAAAGTGCTGTGCTTGCCCCTCTTTA
CCTGAATAATTCCTAAGATTGCTGAAGCATCATTATCTCCTTGTTCTTAGCTACTGATTGTATATTTAATTCCACAATT
GGGTTTATCTCTATTTTCATTCATGCATCTTTGTATCATTAATTCCGAAGTCTCATATAAAATCTTTAATTCAAAAAAT
TGAGTGATGGTACAAGAAAAGCAAACTGCCTATGAATTCCACGTGATTGTGCCCCTATTTACAAGGTATAAATGTGTTA
AGAACTTAAAAGTTTTGAGTATTGATTATTGTTGCCAAGTCGTCAAGACAATGCTTATAAAGTAATCCATTATCCTTT
TCCACACTCTTTTCCCTTTTAGAACAAAAATACCAGCAAGAAAAAAAAGGATGACTGTTCCAGGTCATCAAGAAAGTAG
ACTACTTGGTCATTATCAAAAATATTTTGAACATGTGGGCACTTTATAAAACAAAGAATAAACAATAGAAAATTATGTA
CTTAGAAAGTCCAGACTGTTAATAATTTTCTGCACTTAACACAGTAAGTGGGCCCACAGACATTAAGGTACTAAATGAT
TTATAGATGAATTTATTATTCAGTTTCAGGACACCAGCAGCAATAAAGTATTTTCTACTTTTATAAATAACTCATATGG
AACTTTTATCTAGTGATACACTAACTCTTGTGTTAGAATGTGTAAAGAAAATATTTTATAATGCAATTGTACAGTGTTG
GAGTGATTAGGATTCAAACCTTCAACTTCCAATGAGAATTTTAATACTTAGTCTTTAAAAATAGTAAACTGAGATTTAT
ATTTATGTTATTTCATACCATCCTATATTCCATAATCTTCTATAACATGATTTTATATTCCTACCTTTTATTCAACCAT
TCTCTTCATATTGGACATTGGCTGTTTTTAATTGTTTTAAGATAAGCATACTTGAAGGTCAATCCTGGATTGGTGCATT
AAGATGCATTCTCAGAAATATGATGTATAGAGTTAAAGAACATTTTAAAGGTGACATCGTGTTCTGCTTTTCAGAGACT
GTTAGCAGTGTGCTTGTAGCGTATTACACTGCTGTATCGCTGTATCACTGCACCATCTCAAATATTGAGTTTTTTTATA
GTTAAGTATTTATAAAATTAATATGTTGGATAAAATCTAATTTATCTCAATTGATTAACATTGAGGCTGCAAATATTTT
TATAGTGTAAAAGAATTTTCTATTGTGAATTGTACATTAGTGTCTTATTGAGACATTAACATTTCCTGTCTTTGTTGTT
GTTGCTGTTGTTGTTGTTGTTTTGACACAGAGTCTCATTCTGTCACCCAGGGTGAAGTGCAGTGGCACAATCTTGGCTC
ATTGCAACCTCTGCCTTTTGGGTTCAAGCGATCCTCTCATCTCAGCCTCCCGAATAGCTGGGACTACAGGTGTGCACCA
CCACACCCAGCTAATTTTTGTATTTTTAGTAAAAATGGGGTTTCACCATATTGCGTAGGTCAGTCTCGAACTCCTCACT
TCAAGAGATCTACCTGTCTTGGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACTGCACCCAGCCCTTTCTCCCTC
ACACTTTTGGAAAAAATATTTTTCTCAGTTTGTTGCTTGCCATCTAATTTATTACATTGCTTTTAATATACAACTATA

Fig. 9.185

GACAAAAGAATCACTTTTCTTTTGGAAAATTTGATCTATGACTTTCATTCATATAAAAGCTTTCCTCACCCTCAGGTCA
ATGTTCACCTTTATTTTTTCTAGTTTTTTTAAACTTTGTTTTAATCACTGTGAAAATAATTGAAAGATGATATTTA
GATAAAAATTTGTGTAAAGCTCTACTATTTTGATACAGATTGAAAAGGATAAAAAGAAATGAGTAAGAAGTATGCGTAG
TGTTTAGAATGAACATGAATGATAAACTAATAGGTATTATTTTACAAATTATAGAATATTAAAGATAAATATACTCTAG
AGTATAGAAATATATTTTATATTATTATGTTAAAATATTAAATATTTCAGGCATGTAAAAATAGATGATAGTGTAGCCA
TTTATGCATCAAAGAGTTCAAACCATACAACACTAAAGGTAAAACTGGGGCCCCTAGTGTACCCTTCCCCAATTCTATC
ACCTTTCCTTCCCACCCAGAGGTAACTACTATTATGTGTTTACTTTTCTTGAGTATGTTCTTGAATAGGTGTGTATTCA
AAAGAGACAGTTCCTTTTTGCACTTTGGAAAACAAATAATTCTGCCTTCCCCCCCATGATTGCATTTTATATGTTTTAC
TAAGATATTTATTATAATAAATATTACACCACTTTTCTCTGTCCTATTCATGGGGAAAGGAACTCTTTTTGTTCAAAAT
TTGTCATTCTTATATTGTACTGCCCCATATTCTGCAAATCTGACAACAGAATACATTGTATGACAAATGTGATGTTTGG
TACAAATATGTCAGCTTATGTATGCTGTTGCATGTGTTGCTCAGCATTGCGTGTATTACTGAGCATTGCATGTATCACT
TAGCCTGTCTATAAAAAATTGAGACATTTATTTAAATAATAATTGTCCCACAATCTATTCATGTTTATGCATGTGGATA
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TAATAAATCTTTAATGTATAATACGAACTGATAGAAAAAATAGGGCTCTGCATATTTTTTCTTGAAAAACAAATGTGTTT
TGAGAAATATAGCTTTGTCTAATGCTGCCTTTGTAAAACCGGGAAGTCAAAAGACAAATAATATTTTGATTCTATATGT
TATGTTGATTATATATAGTATGTATGTGAATGTGCATAACTATATGGATTCATATATGCACATATATACACATTCATTT
ATACTCATGAAAATGGTAAAAAATCCAGCTAATGATTTAAACATTGGGTCAATAGCAATATATAAAAATAATATTAAACA
TTCAGATCTTTGCAAAATCTAAATGGGCTTGTTTTTAATTTTCATGTGGACATTTGAAATTTTATAGATAAGACTAACA
ATATGTTTTACTGTACTGTGAGAATTTAAGATTAATGAAATATTATGTTATTAATTTCTTACATTTGTAAAGTTGTTTT
TCACAATACCGTGGCCTATTAGATTGCTAAGAAATTATGTATGTCAACTCTTTCTTTATACAAATATTGAAAATGATAG
TAAGATTAAGGAACTTGCCCAGGTCACAATTTTTTTCTTTCAAATTTCATGGCTGATTTCTAGGCAAAAATTTCAGGGG
CCTGTCCAATACGCATGAATTACCCTACTATAAACAAAGCTAGGGAATTTAATACATACCGAAAGGCATTTTGTAATAT
ATCAGAAACTATACAAAACCAAGAATAGTCATAAAATAACATTTTAACATTTTTAAAAAAAGATTATTCCAAATGCCCT
CACTTCCAGGAATGCGACTTTAAAAGCCTAGGCTTTATGTTATGTCATCAAAGTCATTGTACTCAATTAGACAATAGTG
CTATAATTAATTAAATGTTATTATGTAAATGCAGAATTACCAAAGAGAATTTCAAAGAGTATAACAGTATTAAGTCGTT
TCCTTAGTAATTTCTCATTGCTGTGAAAAACATCTGTAACCTAATACATTTATATTCATTTTTCATATTATATTATGCA
CATATTATTTTTAAATATTTGTTAACAGGTAATTTTCTGATTACCAAAGTAATACTTTTGTATTAAATGTTTGAAGACT
GCCTCCAAAAATTGCAAAGAAGAAAATTTTAAAACCGTTATAATCCTACCTTTGAAATAATTATTCTTCAAATGTTAGA
TATTTGGAATGTTTCCAGGTGTTTACTGGTATAGTTAATGCTGCTGTGAACATCTTTATTGCACATACCTTTTAACCTC
TGTGGAACTGATTGCTTCTTTCATGATTTCTCCTATATTTTGTCAATCATTTCCTTTTTTTCTTTTTCTTTTTTTTTTG
AGACAAAATCTCACTTTATCACCCAGGCTGGAGTGCAGTGGCATGATCTCGGCTCACTGCAACCTCTGCCTCCCGGGTT
CAAGCAATTCTCGTGCCTCAGCCTTCCGAGTACCTAGGATTACAGGTGTGCACCACCATGCCCGGCTAGTTTTTGAATT
TTTAGTAGAGACAGTGTTTCGCCATGTTGGTCAGGCTGGTCTCAAACTCCTGACCTCAGGTGATCCACCCGCCTCAGCC
TCCCAAAGTGCTGGGATTATAAGAGTGTGCCACTGCACCCGGCCAATTGTAAGAATTATTTTCAAAGGAATTTATATCA
AGTTACAGTGCCCCAGAATATTCTGTTATTTTAGCTGTATTGAATATCATAATTTTCTTAACATGTTTTGTCTTTAGAT
GGTATAAAATACTATCTCAATATTATTTTCCATTTGTTTGTTTACCCTTTATATTTCCATTTGCTTGAACTCTCTGCTG
GAATCTTTCAATATCTACCTGATGAATCAATGTTTATCTGTTGGTTTGTTTTCTTTTTTTTTAATTAATTAATTTATTA
TTATTATACTTTAAGTTTTAGGGTACATGTGCACAATGTTATACATGTATTTTATTTCTTTTTGTCACATAAATTTGAC
TCTTTATTTTAAGCAACTATTTCTAGTCTTTTGTTTCTCTTGTTTTATTAAATTTTTATTGTAAAGAAGTTTTGTTTTG
GCCAGGCATGGGGTGGCTCACACCTGTAATCCTAGAACTTTGGGAGGCCGAGGCAGATGGATCATTTGAGACGAGGAGT
TCAAGATCAGCCTGACCAACATGGTGAAATCCCGTCTGTACTAAAAATATTTAAAAATTATCTGGGTGTGGTGGTACAT
GCCTGTAATCTCAGTTACTCAGGAGGCTGAGGCAGGAGAATCACTTGAACCAGGGAGGTGGAGGTTTCAGTGAGCTGAG
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AAGATATGTAATCTCAGTGTTATTTATAAAATGTACCATTCTCACTTTCTTATTTTGTAAAGCTTGTTTAATTTCAGAG
TTTGATATATTGAAGAGTCCTATTCCACTGACTTAAAAAATTGAGGCAGAAGGATCCCCCTCAAGTGTCACATCTTAGA
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TAATAGAAAACAAAATATTTCCTCAAATTACATTCTTTGACATTAGTAATCATTCCTTTATATACATCTCAAGTCTAAA
CTCCCAATCTGTTTATATGCAGAGATTCACAGCTTTAAGATTTATGTTTCATAACTGCAATATCACTCTATGATACATT
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AACTGAAGTGTATCACTTTAAAACAAATATCCTATGGGCAATAGATAAATCTGATATTTTTCTGAGTAGAAGAAACATA
AAACCTCAATATAGGATTAATAGGGTTCAAGGGGTTTATAAGCACAGTGCTTGTGAAAGTATGTAATTCCTATTAAGG
CTTGCATTCATGAGCACATCATGGTATATGCTCTCTCTGGGAATATGTAAAGCCAGTTTAAAATTCAATTACAGACATT
GCAGTCTAGACCTCCGCAAGCCTTTGCACGTGACTGGACTCACTCAGGTTAATCTCTGAACCAGTTGTAGAGAGCTTTT
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TCTTGACAGTTCTCTCATATCTATCTAGAAAATATCTGGCCAAAAAAACCCACTTTACTTTGTTTATGAGATATTAGAT
TATTTTGTACATTTTCACATTCCAGGGCTACAAGGAGACCACAGTAGACAAAATCAAACCGTCTTCCTTTTCTTTATAG
GCTTGTCTCAGCAATGCAGCACTGTAATGTCTCTTACTTGAAGGAACTTCATTCTATTGTAAATTCTTAGGACAAATAG
AATAAGGAGATAGAAGAGTTGTGTGAGTTATAACTTATATGTAATTTTCTGTATATATTTGGAAAGTTCAACATCAGAT
ATTGAGTCTATTTCAGTCTGTTGCTGTGAATAGAATACACTATTTTATCCTATTGGTTCTTTTCTTAAACTGTCAACCA

Fig. 9.186

TGGTTTGAGCATAGTTTAAGAAAAAAAAAATGAATGCTTTAAATAAAACCAGTACCTGGGTTGGAGGTGGCAAATATAT
ACAAACCTGTGTATGTGTGTTTGGGTGTGCGTGTAATCTGAGGATTATAGCCCTGTATCTGTTTCAGGGAGAATTTTTT
TTACATCAGACCATGAAATTGAAAGGTGATTCTGATAATCTATTTCATTAAATAGAAGTTTATGATACCATAGACTCTG
GAATAAAAAATTCCTTAAAATTCCCTATTTAGATTAATGCAGATTTAATCCTTAACCCATTGGTTCAAAACTCAAGTTT
ACTCTTTCAGTAATAACAAGAAGTGGTTGTCAATAATACTCTCATTAAAAATAATTATTTCAGCATTTAAAAAGTAATA
AAATTGGTATTTTCTAACTTATATGCTTAATACTCATCCACAAAGGTTAAATAATTAAGAAATTAAAGACTGTGAAGAA
GAAGGGAAGAAAGAGGAAGGAAAAGATGGTAATATGGATGCTATTACCATTCACAAAAACAACATTGATGATTAGGCAT
ATGTTGACATTTCAATTTTTTGAATCTTGGTAAAATAGTCATTTTAATAACATACTTACCAGATTACTTAAAGTAACAT
TTCAACTCTGTTTCAGCACAGCAGATAACATTCTAATCCATGTAATCATAAGTAGAAAAAGCAGAAAGAAATAGAATCC
TAACACTTTCCAAGCTTCCTTCTCTTTTGTTAGATTATAATTCATGTACATCCTTATTGGGGTATGGGAGACACTGGAA
CTTATTATACTACATCTCATCCATTTGTTCTGTCTCCATGACTGACTTCTCAAAATAATCTAAACTCTTCAGTGAGCCC
TTTAAAGTCATGGTTTTATCCTATATCTGTCCAGGATTTTATCTCACGTTTTGCATGTATCCCAGCTCAAAAGGATTAC
TTTTCTGAACTTTCATTGCCCTTGGATTTTGACCTTCCATATACTTGAAATTCTCTCTTTTTAATATCACCACCAATAA
AAATCCATCCCTCAAGACCTCACCCAATTATTATTTCAAACTCTAAATGCTGATCAACTATGTGGAGCTGACCTTTTCA
TCCTGTAAATAAGTGTTATTTTCTCCTTAAGGGATTTGCCACATGAAAACTTTGCAAACAAGGACAGTGTCTTATTCAT
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TAAATGGATACCATCACTGGGCCCATGGAATTGACTTACTTAACTCAAATCCATGTGAAAGTCACTTAATAAATATTAA
ATACCATCAATTCTCAATTATTCATGGGGTTATTATTCACAACTTACTTGTGATATGTCCTTAAAGGTCATATTTACAT
AATGAATGATTCTGCCTATTTCATTGGCATAAATAGGTTCATTTAAACAGATTTCATTATTTAATTAGCTCCAATTTTT
CCTTTACCATCTTTTTCAGAAGGCAAGATTTTGCTTTTAGCTGTCTTGCCTAAATCTGAAAGCTCATACTGATCATTTC
CATTTAATAAGGGAAGATGAAAAGGGCCGGTCAGGGGACTGGGATCCAAAAGGTCAAGAGTTTTCCATTCCTTCTTCCA
TCAGATCTTCATAGTGGAGTTTTGTTAATTTGTGAATTTAGTTCAATGAGCCAAAAAAAAACTTGCTGATCAAAACAAA
GCCCCTTTGGTAGGGAGGAAATTCTGTCTCTTTGTTTTCTCTTCCTTTCTCTCTGTGCGTGAGTGAGTGTGTGTGTGTG
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TAAGCAATAGAAAACTAACAATGGTTGAATCATCTAAGGGTTTGTTGGTCTTGTGGAAAAGGATATCAGGAGGTAGCAA
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CAGCATATGGGCCTGTCCTGTGCTTGTCATCTCACGACCATTGGCGGATACTGCTTCCCACGGCACWATCTCCTCATTC
CAGGGTAAAAGAAGAGAAATGGAAAGGAAGTAGGAAGGGATGGTGTCTGTATCAGGGAAACAAGGATTTCTTAGGAATC
CTCAGCTTATATAAACCCAGCTACCTTGCCCCTCTCTGACAACCTGTTCTTTGGCAAGAACAATTTCATATACTTGCCC
CTACCTTCCAGGGAAGCTGAGGAGCTTGTTTTTTTAACTAGACATATTATTGGGTGATTAACATTAGGCTTATATAAA
TAAGAATGAAAGGGAGAATGGATATCGTATATACAATCAGCAGTGTCAGCCACAGTCTTATAGTTAAGTGGACACCACT
AAATTTGGTGGGATTAGAAAAGCAATTAGTTGGTGAGATATAAAAAGCAATATAACATAAGGGTTTTCAAACAAAATAT
CAGATGATATTACCTGTATACTATTATGTTAGGGGTATAATACCATAAATATGCTAAATTCAGATTAATAAAAAGTTTT
TCACTTTCTGCACAATCATGACCTCCTTTTATTAAAATAGACAAATAGTCTGGGGTTAGTCACACAAAGTCTATATGGC
ACATGACTACAATAATTGATCTGCAACCTCTCTGTTCTTTAAAGTGATTCTGTGATATCAAGGAGTGTTGAAATTAAAC
CCTGGAAGCCACAGAAGATGCCAAATGGACACATTTTGTGACTATTTATAGCTGATCCAAAAATGAAAGGGGAGAATGA
GGAAACTGATTGATAGTCCCCAATTCTGTTTTGATCTGAAATAGCTTGTTAAATGAATCTCATTGTCAGAGCTAGTTTA
AATAATAAATGTCTCTACTCTCCACTATTCCGTGCATATGTGAGTCTGAAAGTAAAAGTTTGTAATTAAAGTGACTGCA
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CTGGTTTGGAAGCAGAAACATGTTTTGTACATAGCTGTAATGTTATTTCACTTTAACCTGGTTGTCCCCAGTTTAGTAT
CTACGAAGCTTTGCACGTATCGGAACTCCATACCTGCTTCTCCCTTGGTTTCTCTTCTCAGTGATAAAGGATTTGACTT
CTTTCTTCCCCATTCCAGCTTGCACATTCCTGAAGTTTTCCGGCTTGGAACAAATTATATTACTAGGTCTGCAGTATCA
TTTAGATTGAGAAGTATTGTGATAGAGCAAGGTTCACCCTAAGTATTGACTCTTAGAATCTGCTCATTCCATAGTCTGT
TGAGTGCCTTTACCTGTCACTGTTGTCCTAAGCACCAGGAGTGTAGCGATGAAGGATTTCTAGTCCTAGTTATCTAAGG
ACTCACAATTAGGTTTCTATTCTGGGGCTATTTTGTACATTTGTGTACAAAAGACTGCATTTTTAAGGTGTCTGACTTT
TGACTTGGTTTCAGAAGGCATAAGAAGTTGGTTTCATGGTTACAACCCCATGCCCAGAAAAGTTAAGAGTGGTATTTTT
AATTAATTTGTAACTAGAATTAAATATAGCTAGAATTATATAGGAATACAACAAAAGATTAAGATGTATATACATCCCT
CTGAATAATATAAATATTGACAGGCTGATATTGGGTTTTCTAGACTTACTTTCGTAGGTATTTTCTTAGTATGAAGATA
GTTAAAATATACTAAGTGAAAAAAAAATACTCAAGTCACTGTATTAGTGGTTCCACTAGTAAAACTACAGACCTCATCT
GTTTCTGGAATTTGCAATTTAAATATTGATTTTTGGAATGTGGCGACTTACACTGCCTACTTTTAGTTTGCCAGGTGA
GCTCATTTTTGAAAATATCCTATACTCTGCATTTATCCTTTGATAAAATCATGGCTATTATAAATTTTAAAAATGGTAA

Fig. 9.187

AGATCATGTCAGAATAATGAATCGTGCTTCTAATTTGATAAATGTAGCTTAATCACAAATATACGAAACTTTCTGTTGG
TCTGGTGCAAACTTTCTCAAGGAGAAGATTTAGTGTTTCAGAACCATTGGAGTAGATGCTATATTAAACATTGAGGCTC
TCTCACCTTTAACTTTATAAAGCTAAATATAGTCAACAAATGAATTGGAAAGACATATTAGTAAAATCTACCGAGTCTA
GGCAGGCCTATGTGTCAGGCCAAGATGCTTCCTGGAATTATTCTGTTCAGAATGATTCCTCTTTCTTTCTCATTCTCTA
AAGATAGGATGTCAACAGTTTCTTCATAAATGTAAGGTTATAAACCATGACATTTGTGAAACTATTGCAATAATCTTGG
GTTGTGTAGGGATAGGATGACATTTTCAGAGGAAATTCTCTAAACACTTTCACATTAATAACATCTGGGAGCCATAATA
TTATAAGCATAAGAAGTGGATCTCATATAAAAACATAAAATATTTTTTTCACATTTATATGAAATAACATATGTACTTG
TAACAACTGAGAGTCCCTGATCAAATTAGGAAATCTACAGCCATTTATTTTAAATCTTGCTCTACCAAAATTGGATTGA
GAGACAAATTAAACACAAATCATTAGTTACATTTTATAACTATAGAGGATGTGCAGAAAACAAATATTCAAACCCAATT
TTATGTACTATATTGTGCCATATAGTCACAGGAAATCTGTTTTCCTTCTAAATTATTAATAATTTAAAATCATGAATAA
TTGTTTATGTAAGACAGCTGGCCAGGCTATTAAGGGAGTACAGCTACACAGTAACACCAAGAGTGAGGTGTCCATCTGA
GCTACCACATGGAGAAAGAGCAGCTGGCTTTGCCCCACCATATTCAGTTGAAAGCTGCTTATTACTGAGCATTTGAATA
ACTTGAAAGGAGAGAAAAGGAAAGAACAACGTCAGGGTAGAATGTTTACTTGTTTGAGCCTCCCAGGAGAAATGCCATA
CAAAGATTTGACTTGATTTTTAAATCAAACCAAAGATCTTTCAGATTACATTGGAGGGCTGAATTGAAAGTTAACATTG
TATAAGTTGTATTATTTTTATGTTCTTTTGTATTATACTATGTTCCCTTTTATATTATGTTCATATTACCATGAACTTT
AGAGTCGGGATAGATCAGAGCTCAAGTCTTAATGTCATCTCTTCCAAACTGTGTGACCTGGGAAAGACATTTAACGTGT
CTAAGCCTCAATTTCCTCATCTATCAAATGGGGATAATATGTTTACTGACTACAAATTAAGTAAAATAAGACCTACAAA
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AAAGAAGACAAGATGCAAAGATAAAGAAGGCAAAATGCAAAGATCCTATTTCAATGAAGCCAATAGTAGTCTTTCAAGT
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CAGACACATGGCATGCATTGAGAGAAAGAGAATTCAAATTATTCTCTTGAACTTTTGAGCAACTCTATCAATGGGTCTT
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GACATTAGAGTCAGGACTTTAAACAGGCTTTTGGACTCCAGAAACCATGCTCTGCCTACTCAAATTTAGTAGCTGTTCT
GAGGATCTCATTCTCACTTATTTCCCCTTTTTTATTTGTTTGTTTATGTTCTAACCACTGATTTGAAACAAATTCTCAG
ACCAGAAATTTTTACTCCTGTGGAAAGAGTAATTGGATGTTCTCATTACAATATTTTTTTCTTCATGAATGTAATCAAA
CATCAGCTGGAAGCTTGCTTTTAATGCGTGGATAAACCAGCCCACACATTTTATTTTCCCTGAGGCGTATTGCTGGGAA
AATCTATTTCTGATTTTAAGAAATCAACATATGCTGAACCAACTGTCTATTTTCATTTAAATTGACAGGAGCTGAGACT
CAAAAATTATGTTGTATTTTCCACTTCTAACATTGTTGATAGAAAAGTTGAGGTAAACACTTTATTCTGCCTTAGATGC
CTGCTAAATTAGTCTCTCTAAGTAAAAATGTCAGGAGGCTATTGTTGGATTAATTTAGGTGGAGTTGATACAGTTTTAG
GGAAGAACCGTTCTACAGTATGAGAACAACTTTTAATATTATGTTAGTTATAATCTGGAGCATTTATCATACCTTATTA
TATATCGTATGTTTTGACTTTCTCCTCTATTGGGCTGTGGGCTCAATTAAGATAAGAATGTATCTCCCTTATCTTTGTA
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TGGCTATATAGTTGATCTTCTATATAGTTGATCTTCTATATTCAAAATATAGTTTACATATATGTATGCAAGTGTATAT
GTGTGTTTATGAATAAGAAGAACTATATCTTCATACTGTTGAAAAGTTATATTGTTTCTCATACAGATTTTATTCCTTT
AGCTAAAGTTGTATCAATATTAAATTTATAACTAAAACGATATTACGTTGGCACATGAGGGTTTTAGTCAGCTCCAGCT
GCTACAACAAAATACTATAATCTGGATAACTTACACAACAACAGATTAATTTTCTCACAATTCTGGAGGCTGAAAGTTC
TGAAATTAGGGTGCCAGCATGTTTAGGTTCTATTGGGGGCCCTCTTCCTGGCTTGCAGTCAGTGCCTTCTGACATGGTG
GAGAAAGAGCAAGCTCTCTGGTGTCTTTTCTTATAAGAGCACCAATCCCATCATTGCAGGCCCCACCCTCATGATCTCA
TCACCTCCCAAAAGACCCATCTCCGAATACTATTACATAAAGGGTTAGGGCTTCCACAAGTGAATTTTGAAGGGGACAT
AATTCAGTGCATAGCAATGAGTATCTTGTAGGCTTATGACCATATAATTTGAAGCTATGATTTATGTAGAAGTTGGACA
AAAATGTTTCACATAATTAGTTATGTTCACATGATCTAATGCCTGAAACTCATTTTTAAATATGCCTGAAACTCATTTG
TTAAAATTATAGTGTTGGGAAAAGAAGCATTTAATATTTGTTAGCATTGAACTTAAAAAAAATTAAACACATTGACTTT
AGAGAAATGTATATGTTGAAGAGTAGGTGTGGATGAAATGAAAGAAGAGAGCTAACCCTTCTCAGTGCCAGACACAGTG
GTGTGGGCATTAATAATTCAACCCTCATAGCAGTCCTTAGGGTGGTCTTAACCATTTCATGGGGAAATTGAGACTCAGA
AGTTTACTAATTTGGCCAAAGTCACATAATTGTTTAGAGACTGATTCAAATCAATGTCTTCTTTATTCCAATCAATCTT
TTAGGGACCTTATCTGTTATTTATATGAAAAAAAACAACTAACTTTAATGTTTATGGAGTTTGTTTAATTAAATAAAGC
CCTTAGGATTTCAAATTGTTTCCTAAGTCCAAGAGATCCCAATGAGAAGGAACACAAAGTAATTTTTAATGATTTAAAG
TAAATGCTTTAGACTGAAATGGTAGCTTCTTTTTAAATAACATTTCAAATTAGGTTTACTATTAACATTTACAAAGAAC
CAGGGCTATAAATCAACTTTATATGCAGTGCATTCCATTGATCTTAATAGTTGTATTTGCAAGCTGAGTAGAAGAGATT
TACAGTTCTCTCTCAAGGGATAGATCTCCTTTTTTGGGCAATGAATATACTCCTTCAGAAAGTCCTCTTGCTCTTTTAC
GTACTCTTTTTTGCTTGGTATTTCAAAGGCTTTTTGTTATACTTTAAAAATATTCAACAAAAAGTCACTGAATATCTAC
AATGTGTTTATATCTTGGGTGTAATGCCTAGGTTAATAAGATGCATAGAAATATGGACCCAGTGCTACAGGCCCAGCAG
TGAGCAAAACTCAGGGAAACAAGTGACACTAAACAGTGTGGAGAATGCAAAGGCTAAAGGCTATATGAGTCCTGGCATG
AGCACGGAGGTATGGGCTGAGCAGCGCTGCCTGAGGAGGTGATGTACAAGTGGGTATTTATCCCCCCCGGGCAAACCAG
AAGGAAAGGTAAAGCCAAGGAACAAAGTAGACAATGGAGATGGTGGGGAATGGAGGGAGAAGAGGAAAGAATCTTGGAG
AGATAGTCAGTCTTAAGGTCCAATTAAACTATTTCATGGCAGCCATTATTATCCTGAATTTTATGGATGAAGAAGTGAG
GTTCAAAAATATTACATAACTTGCCCTGTGTGACAAAATAAATGAAAAGCAGAGCCAGGTTCAATGAAAGTATGTTTGA
CTTAGGTTTTAAAATTCTAGTCATAAATGGCAATTTAATGTTGTTATATATTTGTATTGGGCTTCAGCAAAAACAAAAA
TAAAACCTCAAGTACACAAAAGCTCTAGTAATAGAGCCATGTTTGTGCAGTTATTTCCAGCAATCCTTGGAACCTCCAA
AATTCTCCTCAGCCTGACATTATATGCCCTATGTGTCATTTCATTATGTCACCACCTGGTGGTGCACTCACACCCACTT
TGGGAGAAAGGGGGTTAGAGAAGGGAGGACATCTGTGGACAAGCCAATAAAAGCATTTACTGGCATCGTGACTTCATAA

Fig. 9.188

TTTACACTTTTATTTATGCATAATTAAGTATAAATAAACAAAAACATGTATTTTCTAACTGCTACCTGTTCTGTTTCCA
GTCTTGCTTGAAAATCATCTTTCTCAAAAAACTACCTATCATGTGCTATGCCCATTACCTGGGTGACAAAATGATCTGT
ACACCCCTACAAAATGCAACTTAGTCATGTAATAAAGCTGCTTATGTTCCCTCTAAACCTAAAATAAAGGTTGGAAAGG
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TTCTTTAGGATTCAGGTGTCCAGATAATCCCAGAAGTAGCCAGCAATTTGGCCATTTGGGGTGTAGAAACCTTCATACC
TAGGTTATTGTAATACCTCAGGCTATTCTCTCCAGGTTTCCAGTGATTAATTAGCTGTGAACCTCAACCAACACCTGAC
TCTAGAAGAGTCTTCAAATAGGTCCTAGAAGGACCAAGTAAAATCACCATCCCTCAATCCCTCAATTTTTCCTTTTTCC
AAGTCAAGAATAAAAGAAGTCTGGGAAACATTGCCAGGTCAGCTTCTTTTTAAGCTCATGATTTTCTGCTACCTGAGGG
AAGGAGAGAAGGAAAAAGAAAAGAAAAGAAAACCTCAATGAATGCTCCATAACCTGGATTTTAATCTCTCTTTCCCTTT
TTGGGATAAAATTGTTTAATGTAATTAACTACAAGGAGAAAAGTTAACCAGTGGCTTCTGCTTTTGCTGAAAGCACTTT
TTCAAACCCAGCTGTCATGTCAAATGCATTCAATATTAGTTTGGACAACTCCTTACGTGGGTCTCAGAATGCATCTCTA
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AGCCCATATTTCATCATTTGACTGTCCTAGGAAACGCCTTGTATACTTGTTTTTTAAGGTATTCTGTCACCCAAGAAC
ATTGAAGGTATATGCAGATTCTCTTTTCCTGTTCTATTCCACTAGACCTGAATATGAGGGATGAAAATTGCTTTGGTTT
TGATGTGACTTCAGTACCTTCTGTATTTGACACAGAGGTGAGTCACATCCTGATCAGTGTTGAAAGCATTTAGTAAGAT
TATTAGTTTATAAAGAAGGCTGAACCATGACTATATAATAATGAAGCAATTGTAAAAAAATCAGAAAGCATTCACATTC
ATTCCTTGAATTTCCAAAAGCATTCAACAACAGAAAAAGGGCAAACACGTTTATTCCATGTATATATACTGAATTCCTA
CTATGCACCTTCAACAATAAAGGCTTTTGGTATATAGGAGTATACTGAGCCCAGTTAGATTCAAGTGAAATTCCTAGTA
ATGTCCTGGTATACAAGGAGCTTAAATGTTCAACATATAACATTGTTTCTTATGATAGGTTTCACCTATAAGCCCTCTA
AACTGTTTGTAACTCTATAAGAAATAATTAATAAACCCCAACAAGGTCTATTTAATGTCTTGAGACAGATCATTCTACT
CACTTTAGATTTCTTATAGATAATAACCAGCACCTAAAACAATTTTTAAAGACATAGGAAATCCAGAATAAATATAACT
ATCATAGGAACATGGAAAGAATTAAAGAAATGGCAGAAGTTGGGAAAAAAACTACTGGAGGAAAAGGGTGAAAATGTGT
GACAATGAAGATTTGCAAAGGTTCTAGAATACTTTAAATTAAGTTAGAATAAACTTTTAGTTGCACTGTGCTTTGACTT
TTTATTCAGCCTAAATTGTCCTTTTAAATTCAGGTTGTTCATCTCCAAGGATGAATGTAATTTAACTGAATCTTGTATT
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CTCTCCTGATATGCGACTCCCATTGGGAATGTGAAGACACAGAGGAGATTTTTAATCAAGAGCATAGGTAGGAGTCAAT
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AATATTGTTGATTGAATGAAATGAGATAATATAAGTAAATTACTTCCAGTAGTCCCTAGCACATAAGCACTCATTAAAT
GTTAGCTTTTAAAATTGTATTCCAGATTAACATGCCTAAAAACTAGGGCTACGTACTGAGAATTCATAGAACCAATTTT
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AAGAGGTCAGTTTGGGCTATAACAATCAGATAAGATTCACTAGGTGCTAAACTCGATCTAAACTGAGAAAAATAGACAA
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GCTCCTATAACAGTTTCTTTAAGGTTAAAACTGCTGGGTTTCTGAGCTCTTCTCCATCCTACTAAATGAGAACCTCTAA
TACAAGAGGACAGTGCTTGGAAATCTACATTTGTATAGAACCCAAGTGATTCTTATCAAGCAAATAATGGAAATTCTAT
CTTAGAGAAGTCTAAACATACTAAGGCCCTTGTTTAGACTCTATGTAATTTCATTTCAGCCACTCTGGGCCTTGACCC
CTGAGAACCAGCAAAAGAGAACTTTCTTCAGCACTTGGCTTAGCCCTCCCCTCTTTTGTGAAGGAGTTTCCCTTCACTG
GTCAGTGTTCCTTGTCTTTAATGATGGTCTTGAACACCACTATGTTGTTGTACTTAAAACACAGAGTTGTAACTGTTTA
CAGGTTTATATCCATTAAACCACTTGATCTTGTGTTTCATGCTCTCTTATTCTCACCTTAGCATTTAGTTACCACTCAC
TAAATCAGTTGATCTTGAAACTTTAGAAATCTTACCCTTACCTGAGGGGTCCTTGTTTACAAAGCAGATTTCTAGATGC
TCTTGCTCAGGTACTCTTATTCTGTAGTTGAAATGGGCATTTTAGGGCCAGACACTTTGGCTCATACCTATAATACCAA
CACTTTGGGAAGCTAAGGCAGGAAGATCACTTGAGTCCAGGAGTTCAAGACAGGCCTGGGCAGCATAGCAAGACCCTCT
CTCTACATAATTAGCCTGGCATGATAGCACATACCTGGCTACTCAGGAGACTGAGGTGGGAGGATTGCTTGAACCCAGC
ATTTTAAGGCTGCAGCGGGCCACAATCATGCCACTGCACTCCAGCCTGGGCAACAGAGCAAGATCCCATCTCTTAAAAA
AAGTGAGCATTTTAACAAGTGTGTAAATAGTCTACCATTCTCTTAAAACACACACAAACATACACACCTTGAAAATGCA
AATGAATGAATGTGTGACAGAGTGGAAGAAACAGCTTCAGAAGGGAGAATAAACATAGCATTTACAGAAGATAGTGAGA
ATACCACTGATTTGGTATGTTGGATGCTGGTTGGGAGAATTTTATGGGAAAAATACCAGTTGAGTGAAATTATGGATGT
TCTTGAGAAATAGCAGAGTTTGAATTGAATGTGGCTTTTTGCATAAAGTGGTAATTTTGGAATTTTGGAATAGGAGAAT
GAATAAAGATGGCATCCCCAATAGTTGTCATGGCTAGTCTTAGGAAGGGTTGGATCAGATGATCTCTAAAATATCTCTT

Fig. 9.189

AACACTGAAATGTATAGTGTTATGCTATAAAATATGTAGATATTGAGTTGTATTAATAAAGCCTTAGCTTGTATTCATG
GGATAAAACTTCTACTTAAATAATATTGTAATTTCATTCATTAATGCATGTGTATAAAAGTGGATCAGTATTGTGGAAG
GTTTGCTTAAGGTGAGATACATGCAATGGTAGCCTGGAGCCAGGTAGTAGTACCAGCTCAGGAGTACTAACTGTTACGT
ATTCAATGATTTTGAGACCTGGTTGGAAAGCACAGGCATTATTAAATTATATAAACCCGTAATTAAATAAATTATATGA
AATGCAAAGGTAATCAATACTCAAAACTCATTAGTTCCCAAGTACTTCATTATATTTTACTATTATCCATGCTCTTGAG
GTTATGTAGTCCATCGTATCTGTGTCGTGGAAATACTATATAATGAGGTGCAGCTACAAATCTCTTCCCAACTCCACAT
TCAGGGCCATCACATTGGTAGCTTGAAATAAGACATGCTGATAGTAGTTACACCATGGAAATGGACATACTGCACAAAT
CAGGCCTTTTTTTTTCTCCTGGAGAGCCAACTGATAAATATTTACCAGCATACCAATGGCTCATGTTTAGAATAGTCCC
ATTGTTTTGGGGTAGAAATTCATTTTGGTACATGGCCTGACTCAAAAGTTCACCCCTTTAGTGTTACCTCCTGTTCAGC
ATTGAAGCCACTTATGTCTCCTTATATGAAACCAGAAACAAGAGGCTTTTTTTTTTTTTAATTCTAAGAGTGGCTGGCT
TTAGTTGTAACAGAAGAGAGCAGGTACCTTTATTGTACTTCAATTTAAACTCCTTTCAAAAGGATCTGAGAACTTTTTC
AAAAAAAATTTATTCCCCCAAATCTGATAAATATGCCTCTATTTTACAATCTTTTACAACTTTTCAAATTACTACAATC
TGAAAGACATTTTCAATCTTTCTTGAAAGACAGGGAGAATATTGCCATGGATGAAGAAAACAATGACTTGTTTCTTTCA
TTGTATAAAATCATTCTTCATCACTGTGAAAATAAGAAAATGAATTTTTTTTAGTTGAGCACAATCTCGAGATCTTTCT
AACAGCCTCTGTTCTTACAGTATGGATGTTACTCTTGGTTTATAGCTCTGCAAAGGAGTCAAAGAATCTTCCTTTTATG
AGGGCCCTGAAGAAAGAAAATTGTGCTGATAAAATTACTTTATGTGCGTTTGAATGATGATATGGCCAAGCATTCTTCA
GAAACTTCTGAATTTTTCATGTATGCCTTCAAGAGTTGTAATCCTTACTTAAGCAAATGTCTGTTTAGGAGAGATTCCA
GAGATTTTCCTATTTAGAGTGTTTTAAAAATTAAGGAAGGTGTTCACCAGCTTACTAGAGGTTCCTTGTGAAAAGAGAA
ATGAGTTTTCTTCAACAGTCTTATGTCTTTGGTTCAAGCTGACATAATTAAGGTGTAAACATATCAGTATAGTTTGTTT
TGATTAAACTTTAGATGGACATAGAATAGGTAATCAAATTCATTGGATCGAAATAAGTATTCTTACTCTGAAATGAAAC
AAAATGGAATCTTCAGAAACATGGAAACAATGACCCAAACATCAGAGAGGCATTGAAGATAAATGGGAATATCACTGGG
AATAGTGTAATTGGAGCAGTGTTTTCCAAGCCCAATCCTCAGACCTCTCGAAAATGGAGATTGTAACACTAGATTGTGG
GCAGTCTATACCAAACCAACAGTACTGAATCAGAGTGGGTTATGGGAATGGCTAGAGCATTTGCAATTTTACAGCATAT
TCAGAAGATTTTTATGTACACTGAAGTTGAGACGTGCTGATTTAGCAAAGGTAACTGACAATTTGCCTCAATTCCCTCA
TCTGCAAAATGGGGATTATAAAAGTAGGGTTGTTGGAGGACTGAATGAGTACATATATGTATAGTGTTTAGGACAATGT
CTGCTGTTTTACAGTAAGTGCTCTATTGTTGGCTCTTGCCACTATTATTGTTTTGTCAAGGGCTTGTCTGTGCTAGCTG
GAATGGAAACTTAAATGTTTCTAATTATTGCAACTGTCAGATTTCTTAAATATCGTAATGAAGCCAGCACAGTGAAGAG
CTGTCCTCAGTTTAATGTAACATTGGATCTATCCTAATAATTTTTCTTAGTTTCCTATTGCATTTGTAACTATTTTATT
TAAATGTTTTATTTTTCCACAGGGTTACATTTATTTTATTACTTCAGAAATATTAGATGTCATTCTGAAATTGTGGCTG
TGCCTTTATCTTGCATGTGGAATTCAATTTTTTATATTCTTTACAAACAGTATTTATAAGAAATAAAGATAAGGTTACA
GTGAGTTGTAGTATGAGATGGTAATTTACATGGGGTGCTCCATGTGCTTAGCTTTTCTCTGAAGTTATGCATCCCCACA
GCAAGGGAAATATTTGCATTTCTGAGAGTGAGAATTTATGTTCATCCTCTACTAGGAATGGTGGCAGCTTTTCCAGGTC
AAGGCCCTGCAGATGCCTGATGGTCATGGTAAATGAAGGCTGGATGCAGGGAAGGCAGCAAAATGAGAAAATCTCCTGG
GATCAATTAATGGGAGTCATCTGAGAGAGAATAAAGGCAGGAGAACATTTTCTTCTAGTCAGGAATTCGCATCAGTTTT
GCCTGGTAATGGGTTTCATGAAAGCCAAGATGAAAGGGTTTTATCCCTAAGGAAAAAAGGGCTCTCCTCACATCCTCTT
TCTGTGCTCTTTTATCAATGACTAATAATAACATGCTTGCATCCATGACAATCTTTCAGAAAACTGATGCAAAAACAAG
TCCAAAATTAGAGTGTACAGCTGTCGTGATTTCCTGGAGTTTCTGGTGTGTGCTTAGTAGGCACACAGTTTGAGTTACA
TGGCTTCATTATATGATTACACACTACTTTGTTGCCTCATTGGTGGTTAAGGTGATTTTAAACTTTTCAGTACCCAAAA
GCAGTGTCCTGGAACATACCAATGAAGACGGAGAATTGTTTCAGTCCCAGAGATATCCCAAGCAAATACAGCAGTGAAC
TCAATGGATATTTGTGAAATGAATAAATAAATGAATGAATGAGTACTACTGTGAATATTCTTGTCATGTTTGCTTGTTC
TCATTTGGAGAGTTTCTTTGAGGTCCGTGACCAGAGGTTGAATTGCTGGATCTTAAAGTAAGAGGATTACCAACTTCCC
TATACGATGCTCAATTCCTCTCCACAATGGCTATACTAGTTTACTGTCTGGCAATCGGTGTATGAGGGTTACCTGTTTA
TCACATTGTTGTAACATTTGATTTTGTCAGATGTCAGGTTCTAACTGAGGTCCAAGGGGAGTTGGTGGCAAGTGGCGG
GTAGCTGGAAAAACACGTGAGGAACTGTAGACAGTTTCAACATGGATTTACTCTCTCTCTGGCCATGAGCCATGAGCGC
AAGATGTATGTACAGCGTCAGCAGCGTAGTTGTACCTTTTACAGACAATAGTGGCTCCAAGCCAAGCACAAGCTTACAT
GGGTGATCACCTAATGTGCCTCACGTGGCGTGGTTACATAATGTGCAGAGTTGTGAGCCTGTGCTCCAAACTCACTGAG
TCATGCTGGACCGGATGTCTGCTTCGGCCTATTTTTGAGAGCAGCACATCCATTTTCCTTACACTCCACCCTCAATGCC
AAAGGAGACACAGGCCTTGGACACACAGGTCTAAGACACAGGCCTTATACGTACACTCTGGGGACAAAGGCCCTGGACA
CACAGGTCTGACACATAGGCCTTAAATTCTACTCCCTAGGCTGAAGGAGTCTTTTAAATGGAGAAACATGCCCACAGGG
TGGAACCCCAGACCCAGAGGCCACAGCAGTAATACAAGGAGCAACAACTCCAGGTTATGACGGCAAACACCCCATGAT
GATGTTACCCGAATTTACTTTATGCATTAAGCCAGGTTTTTATTTCCCTACCTTTAGGGGCATTGGGGCATGCAACAAC
AGGTTACCATCCGTTTCCATCCTGGTCATAGGAGGTCATCCTTCCTCCCATAGGTCTTGCCACATGGCCTAGCCCCACA
TGGGCCAGTGGCCAACTAGCCACTTCTGTATTTTCCAGGTGCCTAACCACAAGGTTAAGCCTCGATAGACCACACAGCT
ATTGGTGCAGATTATCATATGTGTCACCTCTTTGGTGATCACCATTCATATTGCTCTGACTTCAGCCCATTGACTACTT
TGTCCATACCCGGTATGAAACCATATGGAGTCAGTACTAGGCTGGACTGTGAGCAGTCCAGGCAGTAGCAGCACCCCAG
CTAGACCCATCTGTGTACCGTGCCCCATCGGGCATAGGGGGGGATGCCCTTCCTTAAATGGTGAAGGCTCAGCATGTAG
GGGTGCTTCAGGCCCCATGTCCTTAGGCCCCATGGCCTTATCTTGCATTAGGACTGCTGGTCTCAAGACCTCTTGCAAC
TCTGCTGCTAAGGGACTTGTACTCAGCGTACTCTGTTGCTTCAAGTAGGTGCCCCACTTTGCTAAAGTGGATGTCTGCA
CTGTCCCAGTCCGGGGGGTTGTTATCAATGAACACATCCATCCTGCTATCAGGTAACTCGTCTACACGACAACTGTAGC
CTGTCCTGCCATGCTCTCATGAGCCCGAAGGGCAGCATATGCAGTTACTAACTGCTTCTCTATCAGTGAATACTGGAGC
TCAGCTTCTTTCCATAGTTGGGACCAAAAGCCTACTGGTGTTCTCAAGCACTCCATGCTCTGCCACAGGCCCCAGCCAA

Fig. 9.190

AACCATCTGTGGTCACATGCACATCCAACTCAAATGAGCACCCTTGGTCAACTACCCATAGGGCTTGTGCCTGCTGAAT
AGCCTATTTAGCTGCCAGGAAGTCAGTCTCAGCCACACTATCTTAATTCTAGGCAAGAGGAGCATTGCCGCTTCTAAAT
CTGCAAGAGAATCAGAGGTTAACATAATATTATCAATAAGACCATGACATATGATGGGGCTATGCATATATCCCTGCAG
CAACACTATGAAAGTCCACTGTCACCTTCCCGTGAAGGCGAACTGTTCCTGGCTCTCTAGAGCAATGTTAATTGAAAAT
GCATTAATCAAGTCCACCACATAGTGGCACTGTCCAAATTCCATCATCAAGCGGTCCATCAAATCTGTAATAGATGGGA
TGGCTGTCAGGCCATGTAAAACATCCACCCCCAGAATATATCAGCGCTGGTGTTTACCAGTGCCAGCACTTGCTGTATG
TTGGTGGAGGACCAGTGGATTGCTAATTTCACATGTGGCCTCTATTTGTCTGGTGTCCCCCCAGGCCAGGCACCTCAGC
CAGTTCCCTAATCAAACAGAAAAAGCTCAACATTTCCACCTGGCTGCAGCAAGTAGTCTTTGAGTTGAAGCACCTGAGT
GGGACCAGGTCATACAGCAATGTCCTCCTTCCCCTTCTGCATTTCCTGGAATTGCTGCTCTTGAGACAGTTATCTCCAC
AAAGTTAARAGTACTTCATTGGGCTGCTTATCGATTTTCTCTCAGTCAACCCTGGCCAAAGTCAAATCTATCCACATCT
GTGAGTGGGTCACTTGTTGGGGCCCCCTTTTCTTCCATGATGGGGAGGCTCTGCAGGTGGGGCATCTTCCCCTTTTTTA
CAGTGCAGACCCAGACCAAGCAGGGGTCTCTGGCTGAGATGACGGACCCAGGCCTGCATTCACAACAGCCTCTAACTCC
CTTTCCAACCCTATGCCAGGCCTTCAGGCACCCCACCTGCACCTGGAGATCCCCATTCATGGCAGCCTCTAACTCTTTT
TCTAAGCTGTGTAGCTGGGCCTCCAGGCACCCTGCCTGTGCCCAAAAGGCCCTTTCCTGCACTGCATCCCTCAGGGATT
GGGAGTGTACTTCTTGTAGCACAGAAAAAAATGCCCATCCAACTCTGCTGTCAAAGGCTCATTCCTTCTCGGTGCTCTGC
ACTTCCAGCTGCTTCAGTGCTTTCTCCGTGCTCGTGGGGTACCCATCTACTGCTGGCCAGGTTTCCAACAGAGTTCACC
CTTGCAGCACAGCTGTGACCAGGTACCACAACCCATGTCGTGGCCACATTGCCAACCCAGAATCAGCAGGGACCAAAGG
CTCGCCCACCTTGGGATCCTGTTCGTGATGCCAATTGTCAGGTTCTAACTGAGGTCTGAGGGGAGTCAGTGGGTGAGTG
GTGGGTAGCTGGAAAAACACTAGAGGAATCATGCACAGTTTCAACGTGCCTTTACTGTCTGAGTGTGAGCCGTAGGTGC
AAACCATAGGTACAGTGTCAGTCCGGTAGTTATACCTTTTACAGACAATAGTGGCTCTGAGCCAGTTACAAGCTCATGT
GGGTGATCACCTAATGCGCCTTACGTGGTGTAGTTACATAATGTGCAGAATTGTGCACCTGCACTCCAAACTTGCTGAG
TCATGCTGGACCTGATGTCTGCCTCAGCCTATTGACTGCAGCGCATACATTTTCCTTAAATCAGATTTTTAAAATTTTT
GCCTGTCAGATGAGGTATGTCTGTCACTATTGTTTTAATTATTTTTTCCTAATTGCTAGCAAAGTTGCCTATCTTCTCA
AATGTTCACTTATTGTTTTTTTTCCTGTGAGTTCTTGCATCCAGTTTGAACAGTACTATTTAACTTTGTTTTAATGCTG
TCAAATTCCTAAAATAGTTGCTTATGTCACAGAAGTTCTAACCTCAGAATGATGATATCCATGCCAAAGCAGTTGAAAT
TTAAATTCTTAGATAAGTAACTTTAAATATTCCAGTGTTATAGTAAAACATTTATACTGGACTATTCACTCAAAAATTC
TTTAAACAGTTGTCAACCTTATTTATTTCATTATAATAATTGTAACTTTAAATGTGAGATATGATAACCACATCTCTGA
AATGTGACAACCTTGTCCACCAATGTTATTATGCCTGAAACATAAATCTTGGGCCCCTGCTCAGAACCTTTGCCTTCTA
GTTTCAGTAATTATGAAATTAATTTTGTGTTTGGTGTTTTGCAAATTAAACTTACCCTATTAACCCTATAGCGTATATA
CATTATAGATMTATTATTATAATTATTATATTTTTAAAAATAGCTTTATGCTCATTGGGCAGAATCTGTATCAGCACAT
TTTTTGGCAGAATAGATTCAGTAGACTAATAACTCTGTTATAAATCCCTGGTAGCAATGTTGGGTAAATTCAGTGGACT
AATAAATCTGTTATAAATCCCTGGTAACAATGGTGGGGTTTTAATGAGTAACATAAAGAACTTAGAATAAAACAACTTA
AATATATATATATATATATATATATATATATGAATAATATTAACCTTTATTCTTATATTTGTATAATGTAGTTATCTGATT
TGCAGAGGGAGAGAAAGAGACAGACAAATGGATAGACAGACAGAACGAGATCATTTAGACCATAAGGTTAGAAAAATAT
TATGAGACTATGGAAAGGTAATGAATATGGTAGAGAGAGATGGAGCTGAAGATTATAATTCTTTACTTATGGACTGCTC
CAGGATAACTTTGTTTGATGTTATTTTAGCCTTCTGATATCAGTTTATATACTCTAAAACGAGTAGAAAAGAAGCATCA
GTTTGTATAAATATTCTATTTAAATATTGTCAAAGCAGGTCCATGCATCAGAAGTCAAATTAAAACTCACTGGGGAAAA
CTTTGAAAAGGCCTGAAGGAAATGTACTTGATTTTTATAATGTAATTGGCAAAGGAAATTGTAGTCAAATATGAGAGCT
AATGAAAGAGTGAATGGATAAGTAAAATCCACAAATAAGCACAAATGTCATTGGGCTGTTTCCCTTTCCTTACCAAAGA
AAATTTCATGAGAGTTGCTAATGAATAAGATCTGAACATTATATAACCTTTATAAGCATTTTCCTCAACCATTTTTTTC
TGGTTGAGATGTCAACAAGAAGTAATATATCATAATATACAAAAGAAGATGCATAGTGTATTAATAATATGCTACCAAT
TAAAAATCGCTGGAATAATTTGGCATTGGAAATGATGAAGGCATAAAGAGCAGATCTTGTATTAGACAAAAACTAGGAA
GTTATAGTTAGGTTGTAGTAAATGATGAACAATCCATTTTGATTGTGATTCCCAACTAGCTTTTAGGCAGAGCCTCAAC
CACAGAAACTCAATCCTAGTGGATAAAAAATATGCAGACAATTTGAAGGGAGTGAAGAGAGCAGAAGAAAGTATGATGA
AAGAATTGAAAGATTATGCAACAGAGGAGTATTTACAGCCTGGCTAGATAAATGAATGGATATATTATTTTTTTTAATT
TTTTTAGCTAATTTACATTGTTAATTTTTATTTAACTATTATTTTTAAAAGAAGATAAATACTGCAGTGGAAAGAGACT
TAAGGGATTATACTAAGGGCAATTATGAGAACTCTTGGGACAAAATAATGGTCTTATATCAACAAAAATTCCCTGGAAG
TGTGATATGTCAGCTTGCAGAAAATTTTCCCAATGTAGTGATAAGAATTCTCTGAAGACATAGGCAGATTGAAAAGACA
TGAATAAGAAACAATGTGAGATACATTTCCATACTTACTGCAGAGGTAAAGCAGAATGGAATTTGTATCTTTTCCTCTG
CAGGTCCTATTAGAGAAGACAATAGAGAACCCTCTAAGAGGTGATTGTCAAATTGGTTAATATGCTGTGGTTTGGAGTG
CCTGCATTGTGAACAAGGGCACATTCATTCAACTTTCCACATCTTCCTTTCCCTGTAAAATGTACATGGAGTTATGGTA
CCTTATTAGGCTATTGTTAGTATCACATATAAAACCATGTAAAATTCCTACCTTATGCCTGGTTCAGTCAGTGCTCCTC
AGGTGGTAGCTATTGGTTAACCCTATTCTTTATAACATAATTGAAATTAGGTTATATGACTTTTAAATATCCAAACAGT
CAGAATAGAAATATTGATGAGAAATTTTGCTTCATCTCAAAAACAGTGTTAGAACTACACCAATGGAGTATTTTTCTCC
TAAAAGGTTAATCAGGATATGACATTTATAGGATTTACAATCACAATCCTGATAACTGTGAAATATAATATCAGACTGT
TTCTTACTATTTTATTTTTAACATTGACATTAAGTTAAATAATATATTTTGTTACTGTAGCCTAGGATTTTATTTTCCC
TGTTATGAGAACAAGGATAATTATTTTACAAATGAAATTTTAAGGGATTAGAGTGCCATAGACATGCTCATTGCATTAT
TAATGTGCAGAATACTGGAGTTCTGCCATCTTCATGAATCCCCACATTACATTTTGGATAAAGAATAAGTTCTGTATAT
AAATGTAGGCTTCAGAAGCTTTTGTTGATTCTTTCACCATATTTTATACAAAGGCTTTCTTGCTTTCCTGCCTCTCATG
CTAAGTACAGGCCCTTCCTGTACTTTCGGCTAAACGAGATGGCCTTTCATGTATAAAACTCAGCTGAAAAATTGACTTC
TTCATAAAACCATTCCTGTTTCATCCCTGACTCAAGGTCCTGACTTGAATTCTTCCGACTTCCCTGGGCACTGAGCCAG

Fig. 9.191

CATAGTTCTGGTTCGTTGTWTAATTGTTTATATCCTTGTAGCATATTCAGATGCACATAGTCACCATGTCTCACCCAGA
ATCAGAATCTCTCAAGGAAAGAAAGCATGTCCTCTCTTTCCCTAATAATCCCCAAAGCTCTCAATACCATGCTGTGCCC
ACAGAAGGGAATCAGTTAAATCTGCTGCAATTGATTGGAAACTTCTTTTCCCCCAGATTTTCCTTAGGTGGTCTCCTGC
AGAGTTCTGTCTAAAGTAATGGAGACTTGGGATTTGTATTCTCATTATGCTAATGGTTATTACTTCCTTTATTTTTGAA
AACTGGTTGTAGGATCTAAGCTAACCATGCTATTTTCTGCATACCACCCAGCGATTCTCATTTAGCAACTGCCTTCAAA
TCGTCTACTCCCTTTGGTCTCCTCCTCCCCTCAGTAGGAGAAGGATGAGAGGAAGTTGGAATATTTACACTGAGATGAG
ATCCTTGAGCACTTGAGCCCTGAGGCTGCCTCTGGACTAACGTTTCTGTTCAGCTGTCCCCAGGTTTTTCAACAAGAGC
TGTCAGAAACAAGTTTGTGACTAAAGAGCAGCTTCATCTGTAACTTCTGTTTCTTGCTACTCCCTGCTGTGTTTCTGGC
TATCTGGAAGCTTCTCAGCAGGGTAGCAAGTTGTTGGCGCCACTAACACCTTTCCTCTTTCAAATTCATATTCTTCCTT
GGGAGGTGAGTTTGCATTTCAGAAAATTCTATTTTAGTGAAACCACCCAGGAATCAGTGTCAGTTGGCTTTCAGCTGTG
AAATAACTGCAGAGACTTTGTTACAGCTAAGGGGGTGCGATTCTTTTGGAGAGTTTAGATTTTCTGTTTATAGAGAAGA
GTTCTTAGGAATTTTATGCTTAGCTGAAAGTATTAAACACTTTTCCTTATTTCCTCAACATGAATTCTTTTTCCCGGGG
CTGCAGGGGAAAGGGCTCTGATCCTGGTTCAGTCTCTAGCTTGATCATTTTAGTCGAGTTCCTTTACTTCCATGCAACT
CTGTTTCCTCAAGTATAAAACTATTAGTTGAGTGGGTAGAAGAAGTAGATGATCTTTAAAGCACTTTTTAAGTCTAAAA
TGTTATGATTCTGCTATCAAATTCACAGCTTCTCAACATCAGATAAGGGTTGGCATGAGTGTTGCTGAAAATATATTTG
GGTTGGAGGAAGGGATATCCTCGATTAAAAAAAAAAAAAAAAGCCAGATGAGAAATTAAGACTTTTCAGCCAATGCTATT
GACATAAACTCAGGGTGACTTTCACGTCCTAAGTAGAAGTGGAACGTTCATTAATTAAAGCTTAGGTAATACCTCTTTA
TCAAAATTAATAATTTATGTTCAAATTAATCATCATGAATTGACATAGCTAATTTGACCCTTCATGGTTATCAGAGTCT
TTTTGGTGAATATCATAGTCTACATTAATTGAAAGAGGATAAGGTACATAGGTGTCCTCTCCCACAACTAAGCCATCAT
GTCTAATGTAGTAATGAAAGCAGATTTTGGACTGAATTTTGTTGACTGGCAAGCTTTTGTTACCAAGGAGCCACAACTA
TCATAAAGCCTATTCTCATAAGCTCCATAGACTCCCAGCTTTCTGTCCCTTAGACATTGTGATAAGCGTCTTACATGGA
AGATCATTTTTTATTATGTCTGTTTGATTCTTCTCTCTTTCTTCCTTATTAGTCTAGCTAGTAGTCTATCTATTAATTT
TTTCAAAAAATCAGCTCCTGTATTCCTTGATTTTTCAAAGGGCTTTTCATGTCTATCTCCTTCAGTTCTGTTCTGGATC
TTGTCTTCTACTAGCTGTGGGGTTTGTTTGAGAGGACATGAACAGACACTTCTCAAAAGAAGACATTCATGCAGCCAAC
AAACATGAAAAAAAAGCTCAACATCACTGATCATTTGAGAAATGCAAATCAAAACCACAATGAGATACCATCTCACACC
AGTCAGAATGGCCATTATTAAATAGTCAAGAAACAACAGATGCTGGTGAGGTTGTGGAGAAGTAGGAACGCTTTTACAC
TGCTGGTGGGAATGTAAATTAGTTCAACCATTATGGAAGACTGTATGGCGATTCCTCAAAGATCTAGAACCAGAAATAG
GATTTGACCCAACAATCACATTACTGAGTATATACTCAAAGGAATATAAATCATTCTGTTACAAAGATACATACACAGG
TATGTTCATTACAGCACTATTCACAATAGCAAGGCATGGAATCAACCCAAATGCCCATCAATGATAGACTGGTTGAAGA
AAATGTGGTACATACACACCATGGGATACCATGCAGCCATAAAAAGGAATGAGATAATGTCCTTTGCAGGGACGTGGAT
GAATGTTCTCACTTATAAATGGGAGCTGAACAATGAGATCACATGGACACAGGGAGGGGAACAACACACACTGGGGCCT
GTCAGGGAGTGGGGTTTAGTGAGGGAAAGTATTAGGAAAAGTAGCTAATGCATGCTGGTCTTAATACCTAGGTGATGGG
TTGATAGGTTCAGCAACCACTGTGGCACACATCTACCTATGTAACAAACCTGTGCATCCCGTGCATGTACCCCAGAACC
AAAAACAAAAAAAATAAAAACCTAAAAAAAATCTTATTTCAAAAACAGGCTATGGGCTAGATGTGGCCTGAGGGCCATA
GTTTGTTAAGGCCTGGGACTAGACCAACATATGCATGTGACCATCTTGTGGATGAGTTTCCACAAGACTGAGAGCTCCA
TAAAGGCAGAGACTGTATTTTCTCATTTTTTATTCCCCTCAGTGCCAAGAAAAACAGTAATTCAATAAATGTTTGTTGC
ATTAAAGAATTTATTCACGAAGAGTTATAAAAATCAATCCACTGTTTTTCCATTTGCTATCTCTGAACATGTACTATGT
CATTTTTACTTGAAGATATTTATATTGAAATCTCTGGTTAGTGATGTCTCACTTCTGTGTACAGCTAAGAAGACGTACA
GTTTTTAAAATAATGTTACTAACTGTAACAAAAACTATTTTATCAAGAAATATAAAAGAAATTCTTTAACAAGGTTGAG
AGGTTACTTCATGCATTAAGTTTCTGCTATCTTGCTGATGTTCTGCTATAAAACCTTACAGACACTATGTCTGTATTAC
TGGTTTCATTTGAAATTTTGCCTTATGATTAATCTAATTTGGTTTCATTGTCCATAATAAAAAGCAATTGAGCATCACT
GATGTGSATACCATTTTCTTTAGGTTTTAAGAAAACCACTCTAATATTTTTTCAGGGCCATTATTTTATCAAATATGTA
TATATGTGTGCATAAGGAGARGGAGCTCGGAAAAGGATTTATATTTCCTTATAGTCAATTTTATGTTCTTTCTACCCTA
CCACTAGCTCCACCATATTGAAAATATCTCTATAAATATGGGTTATGTCCTATAAGCAAAGGATACATTCTAGAATTCA
TTTCTCTCTAAACCATGAAGCATCATCCTTAAGCAAGATGCTAAACCTGAAACCTCTGTAGAGCACATTTGGGTAGACT
TATGTTCTCATTCTTGCCTAGAAGAGAGATATTTCTAGTTTTCTTATTTGCTAACCTTATAATTTGAGCACAGAATGTC
AGATTTGTTTCAGCCCTTCGATTTAATCACATCATGTCTGATATCCTAGCATTTAATTACCCAAATTCCCAGTGTTGTT
CAAGAAGGTAGGTCTGTGGTGGGTTAGCCTTAAGCTAGTGGCTGAAAAGGTCTTGATTTGCCCCCACATCTAACCTAGT
CACTTCCTGAGCTGAAACTCCCATATCACCTGGGGACAAGCGACCCTGAAATCCTCACTGGCCACAGCTTCTTCTGAGG
GAAGCTGCAGGAAAAAGAACAAAAATGAGCTTTTGTGAAAGGATTAACTTGGGTGAAGAACATCCTCCATAACCAAATA
AATGGAACCTAGTAACCCACATGGCCAATCCCCAGGGCACTAGTGTCTTTGGGGATATCAGGGTGTGTATAGAATTTCG
TTTTTGTCATTCTTGAAAACATAAAAWAATCTCTGAAAGAGTACTAGTGGTCAAGGTACTAGTCTAGAGATGGACCAAA
CAATCATATTAAACCTAATTTAATCTCCAGAATTTATATTTTGAGATTGGTAGCACTACTATCTTCATTTTGTACTTTC
CCCAACTTCCTGCAGCTAGGATTCAAATACAGACCATCTAACTCCAGAGCACTGCCCTTTAACATTGTGCTATAATCCA
CCACTTTGCATAGTTGATCCTACAAGAGGATAAGTAGAGATCAAAGTAAGAAGTGATCAATGGATTACTATGTCAAGCA
TGATTCCCTCAAACTATTGGGAAGAATAAATACCATAACATGTATAGGGTGCTGTGTACAATTCCTGGCACAAAGTTAA
GTACATGATAAAATGGAACTATTAATATTAGTAACCCAGATAGGTTCTGGGCACATTAGCAGGAAAGGTCTTCTTAATT
TAAGTAAGGTGCTAAAAGCATCTAATTTTATTAGGATTGTTATGAAACAAAAACTAAATGTGCAAGAAAATATATTTAC
CGTAGCCTGGGGAAAATTGTCATGGTTTCTCTTTTCAAAGAATTCAATTTGGTAAGAAACAGCCTTCAATGGTCCATGA
AAAGTGAGAAGTGTAGGGAATAAGAGGCTCTTTCCTATGTTTGCATTTCAGGCTTGCCTTCTTACTTTTAAATTTATCT
TTACAATTGCCTTCCTGCTGGGTTTGTGTCTTCCTCAGTTTAGGGAAGGTGACAAGAAAAGTCCTGTTTGTGTGTAATT

Fig. 9.192

GACATGAAAAATGGTAGGCTTTTAACTCAAGGAGGCTCCAGACAACAGTTTGGTTATTAAGGAAGGGGAGGACCTAGGG
GAACAATTGTTTCTGGCCTCTCTTCTTCTCAGGCCTGGAACAATCTTTCATTTACTATATTCTTGCCACAAGAGCACAG
TCAATATTAAATTCCAAAAAAAGAAAAATCCCTCACAGAAACAGCTGTGTTCAATATACAGCCAGTTTACTCTGGCGAA
TTGCTAGACATGGAACAGTTTTCATTTCTTTTTGTGTTTATCCCTGATAGTTGTCTTGTAAAATCTGCCTTTTGTAAAT
AAGGGAAGGCTGGTTTTAAACAGCTTTGACTAATATTGGTAGTTGGAGTATTCAGTATTACAGAGTTTTAGAGAACTAA
AATAAACCTGATGGAAACACACACATATTTCAAAGGAAACATTTTAAGGTGTTCTGGTTCCATTTTTTCCATTTTGTAT
GTAAGTTGGATTATGATACTTTTATGTCTACATTGTCTCTTAGTCAAAAATGTGAGAGACGCCATTCAAGTCTAGACTT
GGACCCTACTGAATGCCTTGTTCATGGACACCACACAATCTCGATGTAAATGTTTATTGCTGATCTGTACAAAAAGGGG
AAAAGTAGTTTTTTGAACAACAGAAAATACCAGTTAATCTCACTGGATTCAGGAATTATAGCAAAGCAATCCAATAAGT
GGATTCTCTGAGAGTAGGAACTCAAGTGTGTTATCTCAGTTTTTATCCAGTTTCCAGCACAATGCTGGCACCATTTAAA
TTCTCAGTCAATGCTGGAGAATTGAAAAAGAATCCTCAAAATTTGGATGACAAAATGACAAAGGTGTCCCCTGATACAG
AAATCTGTCCATGGCAGAAAGATTAGTGATTTGAGATATGGTGTCATCATTGTAGATGATGGTGTCCCATTAAGCATGT
TTTCACTAATTACAATAAATGTTGAAAGAAGGAGTTTCACCTAGTATCCTTACTAATATCAGGGAATGGCCTGGGCTTT
GGGGAGATGAGAGTCCTCTGCTTTCAGTTTAATAAAGTAGGATATTTGTGTTTTTGTTTATATTGTTAAATACGACGGG
TTAGCTTGTCACCTACATAATATTGTGTGGCATAAATAAAGGTGAATTCCCAAATATGTGCTCCATAGTGTTGACAATG
AGTAAATGTTCATTCTAATAATTGTAAGGGTTACCTCCCTCGCACTCCTTGAAAATATCTTTTTATTCAAATTTTTCGA
GCTGGAGGTCATGTGTTACATTTCCTGTTGTGTAACATGGCCTCCCTCTCTTTCTCTGTCTCACTTTCTCACTTTCTCC
CTCTTTCTTTTACTCTCTCTGCCTCTACCTCTGACTCCTTCTCCTTCTTCCCAGCTTTGCATCAGAGCCATGTAACTGA
CATTTTCTTGGTTCCCTCAGGACCTGTCATAATAGCAGGCAAATATTAGATGATGATTCAATGTTTAATGAATTTTTCT
TGAATGTATGTATGTTGCTTCAAGTCATTCATGCACACATTGAAGAGGACAGACAGAGCCCTGCTGAACACCACTAGCA
AATCTCTCTCTAGTAGACCACAACAAGTCAATCTGTGCTCTTTGATTACAGTTGTTCAACCAGTTACTAATCTAACTAA
TTGTAACTGGTTGAACAACTGAACCCAAAGGGTGCAAAGTAGAAACATTTCATTGTGAAGTCGGCTGGGGACAAAGAAA
ACACCACCAGAACCCCCTTCAATATGCAAAGGGAAAATTCCTTCTCAAGTACAAGCTACATGGTGCCTTTTTGAATTAT
CATCAATTTGTAATGCTGTATCAATACATATGTATTATCTGTTCTTTTGGTAAGGGTTGTTTGAAGTATAAGGTACTTC
CTCCATTAAGGTGATACTAACCACATGTTAATTATTGTCTGAAAGTCACCAAGGATATGAATAATAAAAAGTTTTAAAA
ATAAGACCTGTTTCTTTTATTGATAGTTGTACCTCAAGGCTGAAGTGAGGTTTGCAATGTAAGTTGTAAAATGTGATGT
GAAATAGACAATTCTTTGTAGTTTATATAAGGCAATATATCCATGTGCAATTATGGTCAAAAACAGCAGACTTTTAAGT
GATTATTCTAAAGTTATTTTTTTCCAAAATAACTTTATTACTCTTGATATCATACCATATTCACAAAACATTCTGGTAA
AGCTATTGCTCAGTGTGTTGTCCCAGTGAGACTCAGGGAACATTTCTATGTGACGCTTTAGGATTGAAGACAGTTCCAC
GTTTTCTGAGTAATTCCAAACTGTGTAAGAGATTATGTTCCCTTTGCATATTGGCTGCTAAGAAGCTCACTTTTTCACT
TATGATACTTGGATGCATTTTGGCTTTTTGGGTTTTTGTTTTTTGGTCTAATTTTTTTTTTTTTTTTTTTTTTTTTTGA
GACAGGGTCTCACTCTGTTGCCCAGGCTGGAGTGCAGTGGCACCATCATGGCTCACTGCAACCTTGACCTCTCCTGGCT
CAGGTGATCCTCCCACCTCAGCCTCTCAAGTAGCTGGAATTACAGGCATGTGCCACAACACCCAGCTAATTTTTGTATT
TTTTGTAGAGATGAGGTTTCGCCATGTTGCCCAGGCTGGTCACAAATTCCTGGACTCAAGCCATCTTCCTGCCTTGGCC
TCCCAAAGTGCGGGCATTACAGGTATTAGAGGTAGGAGCTACTGCATCTGGCCATGGGAAACATTTTGAATGATAACTT
TGTTTGTTTGTTGTCTGTTGAGCAGGCTGGAGTGCAGTTGCATGATCACGGCTCACTGAACTCTTTCCTTTAATTTTTT
TATTCTCTCAGCACGATTATAATTTATTTTAAAAGTAGGGAATAATTGGCCAGGCGCAGTGGCTCACACCTGTAATCCC
AGCACTTTGGGAGGCYGAGGCAGGCAGATCACAAGGTCAGGAGATCGAGACCATCCTGGCTAATATGGTGTGAAACCCC
GTCTCTACTAAAAAATACAAAAAATTAGCCGGGTGTGGTGGTGGGCACCTGTAGTCCCAGCTGCTTGAGAGGCTGAGGC
AGGAGAATGACGTGAACCTGGGAGGGGGAGCTTGCAGTGAGCCCAGATTGTGCCATTGCACTCCAGCCTGGGCGACAGA
GTGAGACTTCATCTCAAAAAAAGAAAAGCAGGGAATAATTAGTAAGTGCCTAACTAATCAAAAATTGTTTCCAGGTGAT
GTTGCTGTTGATGTATGAAAACCTCTTTCACCTAGCTTCCCTCTTCATTCTTTTCTGTCATATTTCTATTGACCAGTGC
TTTCTTGGCCCTTGGAAATGTGATTAACTTTTGCCATGACCTCTATGTTAGTGCCACACCTGACACCTTTATGCCACTC
TCTGCCTCCAGAACTCTGTGTCCATCTTATATGTTTTTACCTTCTGCTGGGCCTCAGGTCTGGATGCAAAGCTGTAGAG
GAATTGAGCTGTTTTTCACAAGGGATCCAAGAACACATAGCATGTGTGAACTGTACTAAAGCTTTGAGAAGTTGTGAAG
AAGATTCACATCAACTATGCACCACACAGCCTTCTTGTCTTGCTGGTACCATCTCCTCACCTCTGTGTTGCTCCTCTTG
GAGTCTTCACCTTCCACAACCAGCACTTCTATTCTCACTGTCTGAGTGTGACTTTCCATAATTGTGAAACTCCTTGGGC
TTATCCCTCACACTCATTCTTGAATTCTAAGGAATGGCATTTTCTCCATTGTGCTTACATTTGCTTTTCAGTATTAATT
GTTCTAGAGAAAAGCATTCATTCACTCACTCACTCATTCACTCATTTAACAAAACCTGTATGGGTATCTACAGTACTAT
GTTCTAGGTATACTGAAGACACTAACATAAATAATACAAATAATAACCTTTTCTCAGGGAATTTAGATTAAAGTAGTTC
AAATTGGAGCAGGGGAAGCAAATATTTACGTAGATTATCAGGGAAAATGTGTAGTGAGTGCCGTGATTAGCACTATGCA
GAAGATTTTATGGGAGTGGCAAAAAGCAGAACCTAACCTTTTCTGGGGTGAAAAGTGTGACCTAAACTGAGTCTTAAAG
AATGAATGTAGGGTGGAGAGAGGAATRGGAAGAGCATTTCAGGGAGAGAGGAATAGCAGGAACAGAGACACTGATGCAA
GGAATCCCATGGTATTTGTGATGAAGGGATGATTTAGTAGTTCAGTGACAAGACATGAGCCTGGAGATAAATAAGGTTT
AGGTTCTGGGGACCTTGTGAGCCAGGTTAAGGACTTTGGGTTCATCCTCAAACCATGAAGCATTCCAAGCAATTATGTG
ACAAGATCAGATTCTAGGGGCTGAATGGAGAATAAATATGTAAGTGGCAAGATTGAAGGCTGGGAATGTAAAAGGTGGC
TCCTGCTGTGGCTTGGGCAAAACATCACATAGGCTTGAGCTAGCTTTGTGATTCTACGGGATTGAGAGGAGAATGCTAA
TTTCATAAATGTTTAGTGGATATGATTGGCATGTGAWCTGAATGCAACTGGAGAAGGGGACCAGTCATTTACTGAGTWG
ATATTGGTAATTGATAAATAAGACCAAAGAAGGTGAGGTTTGGGGATAGGCAGTGTAAATTTTGGAAGTAATAAGGGGA
TTGAGGTTCTGTCCATGGCATTGGTGGGGAAATCTAGCATGTAAATACATGTAAATAGATAAGTAAATATGCCTATACA
TTTATATAAGATATCTATACACTTATTCTCCTTCTTTGTTCATTATTAGGTGTGAAATCTACGTGATTTTTTTCTCCC

Fig. 9.193

ATATTATTTTTGGTATTCAATAAATGTGAATCATGAAGAGATAGCTGTTTTATTTAATCTCTGCAAAGTCACATTCTTA
CCCATTTTGATTGTAATAAAAGGCCTATGTCGTTATTTAATTTTTTAACCTTTGTGGCATGATTTATAGAAGGAAAATA
AAAGTGTCATAGGTATGATAGGCCAAAGTTGGGTTGTTGGTAAAATAATAATACCACAAAATGTTTTTCTATTTAGCCA
ACTACTGCAAAGTTACTTTAATTGTGTTTGCAATTAATTGATTTCACTTTAAACCAGAAACAATAGAGACTGTAATCAC
ACAGCCCTGCAGTTCTGAATGTTTTGTTCTTCCTTTTATTGGTTTTCTAGATATTCCTAGTTGGCAACAGGATAGAGTT
CAGTAATGGTTATGCAATTTCATTGTGCAGGGTATTAAAATTTGTGACCAGGGATCCCAGGAGACCAGCTATTAGATTT
TCAATGCACTATTAGATTAAATMTATCTACTCAAACTAAAGGGATCCTGCCTGAGGCTGTCTGATCAATAGTCTATCAT
TCCTGTGCAAATGAAGCTATTAAGATTCTCTTAGGAGGTAGACTATCTAAATTGGATCTAACTAGTAGATGGTGACTGA
AATGAGGGATATACTGATACTTAATTGGCATCAATCTGACCTTGATAAGATTTTGAAAAAATAAATACCTTTTTGCTAC
AGGTTGAAAAAGAGGTGTAAAATAGTCCCTATTTTATATTATTGGTTCTTAAGTACTTATCAGAAAAATGACAAAAGTC
AGTGTCCATAAACAAAGGTTCCATTGATCTTTGATCACCAAATCATCATTTCTATCTTCCTCTTTTTTGTTTAGGTCAC
TGCAGTCACCATTACCTCCACCACCATCATAATTATATATAGCTACCACTTCTTGGACACTCAGGTCTGCTTGTGTTTG
AACCAGACATTTCTAGCTCCAAAGCCTGCATTCTTAATTTCCTGCAGTCTTAATACCATCTTTTTAATAGAAGACCCCC
ACAGGAAAAGCTGATTCTATAATTTAAAAATGATTTGGGGATCCAATAAGTCATGATTCTATTTTATATAATTTTGGAA
GATGTGGCCAGAGAGCTAACTCTTTTTATTTTATTATTTTTCTTTTAATTGTTGACGTACTTATAACCACCAGCTATGA
AGCTATAATTTATTGCCACATTGAGTATGTTAAATTGTTAATTTACATAATTTCTGATTCTTATTTCTCCCCTCTCAAA
TTCAATTTGATAATTTAACATACCTGCTTCTGTGTGTTCCATGGAACTATTAATATAATTTTTTAACAGAATTATGAGA
GAATTACATTTCCCCAGCTGTAGATCAATTGAGAAACAGTAGAAATGAAAAGGTTAAGAAATTCTGCTTCAAAATCTCA
AATGGTCAAAGTCATTGACATTGTAAGCTCTTCTGTTCGACTCAAGCCTGGTGGAAAATGTAATGAAGAGGTACAAAGT
ACACTGCATAATCCAGCAAGCTAATTGCCCACTTTAAGGCCTCTTGAGCCCAATGGCCAAGTGAAACCTCCACTCTCAG
GGAAATTAGGCAACTGCTAAGGTGGTTTTGCAGTTTTCAGAGACACAGAGATTAGGTTTTTCAGCCTTATATAGATCTG
TGATCACTAATGATAGTCTGTGCTAATGAAGGTAGTTTTTTGAATCAAATGCATATTGACTTAGGTCTTCAGCGCAGAA
TGTTGATTCACTGCTGTCATCCCTGTCAAGAGAGCTGCATATGTAATTATGGTTTTCTTYTGAATAGATTTGCTTTGGG
ACTGTCACGCAAATTCCATTTCTTCATGTTCTTGCTATCTTTCAACCTCAAATAAATAAATAAATAGAAAAAATATCTC
TAAGCACTATGTGTGGGCTGTCATTCTTTTTACATTTAGTGTTCTAATGTTTTTAAACAAGTCAGTTTACAGGTAAAGT
TTGCTGTAATAGGATTGAATGTGGGTGTATGTGGTGGTGCTTCAGATCTCTTTCCTTCTGCTTGACCCTTCATGTTGGG
TAATAGTTTTAAAGCGCTCATGCCAGAAAGTAAACCACAACATAGTCAACTTCTCAAATATCCATGCAATGTAGAAAGT
CCGGGGTCAAGATGATTACTATGTGATCTGCTTAAGTGGGAACAGGGCCATTTCCCTCGCCTTCAACACACTCAGATAC
ATCTCAGCCAACCAACATTTTGCTGTTTGAAAAACATGGCAGACTTTATCTTGTCCCTAAAGAGAATGCTTTTCTCCAT
CCCTCTGCTTAATATCCTGTGGCTCCATTTAACCTCCAAGCCAAAGTCCAGTTTCTTTTAGAAGACTTCAGGCAAAATT
AGGAGCCTCTTATAGTGGGATGAATGCTTTCTATACTGTTTTTGTAATATTTTTGTAACATTTGCCATATTAAACTCCA
TTTATTTTATGGGTCTGAATCTTCACTAGACTAAACTGCTTGAGAGAGGAGCATGTATAATTCATTTTCATGTTCACAA
TGCTGAAACTGATGTCTATAGAGCTTCAGTATTTGTCCACTGCATAAAATCAGTAAATAAAGGCAGGAAAGTTTGTTAC
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GCCCTGACCTGAATCAACTCTGAGCCCCTACCTAGGCTGTTGTTTCTTAGCAAGTACATAATAACAACTCATCAGAATA
GCAGAGATCTTGGTAACAGGTTGCCTGACACTTGACTGATATGGGAAAATCCTGAACAGGTTTGGACTGGAATCTTGGC
TCACAACCTGTGTGACCTTGGTCAAGATATTTTATCTCTCTGAGCCTCAATTTTCTCTTCTGTTAAATGAGCATAGTGA
AACTTTGTTCATTGGTTTGCTTTGAAGAGTAAATGAGATGGTAAGTGTTGGTGTATGTAGTGCAGGAACATAACAATTC
TTGATAGATATTCATTGAATACCTRTAGTACATAGAACATAGAAAGTTCCTGTTATTCCACTCCCACCCCCACACACTT
GCCCTTCAGGTCTCAGGTTCTCCTTCCTGGTACCCCCAGAAAGATTAAGCCCCTTTGGCCCTCTATGTGCCTCTTTTAT
AGCATTTAACACAATTATAATTAATTGATTATGTAACTTTTTTATTTAATAGCTGTCTCTTGTAGAATATAAGCACATA
AATTCAGGGACTATCTATTAATGAATTTTCCTCTAGTGCCTAGTACTTAGGTGGCTCACAGTAAATGCTGATTCAATGG
ATGAATAACTTTATTCAGTCTGCTCAGTGTGGCCTTTAATTTAGATTCACCCCAAATTACTCCCCATCAGGAAGGCTTT
CTTATTCAACTTTCTCATCCTCAAGATTAGCAAAACTACTCTCTTTCTATTCCCAAATATCTTCTCTCAGTTTCATTAC
CATGATCAGAAAGTACTCTTCCTTGAATTTATTTTCTAGACTAGATCTATTTTGGGGTTTTCTTACCAGTGATTGTAAC
TATTGATGTGGTCTTTTTTCTGTTTTTTACTTCTCATATGTGTATCTCTTTCCATTAGTCCTTCATTCCTTCAACAGAT
ACTTTCTGTTGTGACAGCCACTCTTCTAAGCACTATGGAAGGATTTAAAGCTGTGTGAAGCACAGTTATTCCGGTCAAG
GAACTTAAAAAAATAATACAAGTGACAAAACATGTGCAAGTTTGACTAAAGTATGAGACTGGAATAAATACCTTATAAA
AACCAAGAGCTTCAGTATTTTCCTGCAGTTTTTTGCTCTATTGTATTCTCAACTTTTACTGGTTTCTCATCAAATAAAT
GTGTTAAAGTATAACTCAGATCATTGCTTAGATGTACTTACTTTTCCAACAAGGCCTTCCCTGAACATCCTATTTACCA
TTGCAAATGCATTCCTCTCCACTAGCGCCATTCTTACCCTCTCTTTCCACATCAATGAATTTCATAGCACTTGTCACTT
TTTTTCATGCTGTATAATGTATATTAAGATATTGCTTATTGTCTGTCTCCCTTCAATAGAATGTAAGCTCCATGTGGGC
CAGGATGTGTAGTCATTGATGTATCCCTAGAATAAGTGCCCAATTATAGTAGTCATTTGATGGACATTTATTAAATGAA
ATTATGAATGAAGTAGGGATTGGCAGTTATACACTAAGACTCTGGAAAAATGGCCTGAGTTGAATCCTGGCTTTACCAT
TCTTGGCTATATAATCTCATATTATTTACTTTCAGCCTTTCATTTCCCAGATGCCCCTACCTTCTAGGGTTGTTGGGAG
GATGGAATGCATAATACATGTAAACCAGCAAGTTCATAGTAACAAAAGTTGACTTTTTAAAAAGTTAACTTACTCTTCT
TTCCTATATATGTGTAAATCATATTTTATTTTCTCATTTAAAAAGAAGACAATAACTAAAGGTATTAGCACATAATGA
TTCAAAACATAATATTTCCACATGTCGAGTTGAATGACTTTGAGCCAGATAATATGAGTTGAAATCAGTTTAACAATAA
TTAAATCAGCCAAGAGCAGTGTCTCATGCCTGTAATCTCAGCACTTTGGGAGGCTGAGGCAGGTGGATCACTTGAGCTC
AGGAGTTTGAGACCAGCCTGAGCAACGTGGTGAAACCCCATCTCTACAAAAAATACAACAACAAAAAATTAGCCAGGTG
TGGTGGCTCATGTCTGTAGTCCCAGCTACTTGGGGGGCTGAGGCAGGAGGATCACTTGAGCCCAGGAGGTCAAGGCTGC

Fig. 9.194

AGCGAACTGTGTTTGTACCACTGCACTTCAGCCTGGACGACACAGACCATGTCTCAAAAAGAAAAAAAATAGAATAAAA
TCAAATACACACCATTTTTGAATATGTCACCAGTCTGTGTAGTTCATCTTGAAAGGACTTCAAGGTCCAATATGCATCA
TGCAGAGAGTTGCTAGGGCCCAGACAAGAGTGACTTGACCATTGGCCTGAGTAGTTAAACTATCAGATAACTAGTGAAA
CAATTCGGCTATTTCAACAAACATGTTGCATACATAACGTGTTATGCACAGAGATGACATTTGGTATAATATTATGGCA
ATAAAAGGTGCAGTTCCTGCCTTGGGGAAGCAATTGTAATATACTGTGAGGAGCTAAGAGTAAAGAAGGGGCCCTTGTA
AATGAGGGGTGGGTCAGTAGGGTAGCAGTTGGCAGAAGACTCACACTGGAATAAATGCTCCTTGACTCGATATTTTTTT
TTTTTCAAAAATGCAGAAGCATTATTGAAGCCCGGATGTTTGGGTTCTATGATAAATAAAAGATATGGATTTGAGCTGC
TCATTAAATTTTGAAAGAAAAGATCCTAAAAGGTTAGAGACCATGGAGATTTCAAAGTGGCTGACCTTGATTAGATATA
AGTGTAAGTCAGATGGGTATTCCTGGGGGGTCCCGACTTTAATACAATTTGAAAGTTTCATGATTATGAGCACCTCTCT
GTGCCTCCTTGGTGGAGAGCTGACCTATGAGTAGTTACTGTGTGAATTAATGAACATCCTTCAGCAAAAGTTATTAATA
GTAATGTTTGGTAAAAGTCCTTTAGAAGTAGACTGTTATGTGTGTTACTAGTTATAATCAATTAATAACCTGTGATTTG
TAGGAGCAAATGGTCATAGGGATACAGTATACATTTTAATCTTGCTCTTCAAACATCACCGTAGATCCATGGTCCTTCT
CAAGACATTGGCTTTGTTCTGAAGCAGCTCCCACGCTCTTCCAGAAATCTCTATGCGGGACTCTGAATGTGGTCAAGAA
GAAGATGTACTGGATGCACATTCCCTATCAGGAGTCTCTTAATAGTCTCCCACCCAGTTACAACATATTGCTGTAATCC
CACACAACAGCTGAAACATCTTTTCTTCATTTCTTTTAATTCCTGTAGCATTTGATGTCTCCACCGTGTAATTTACATT
TAATTGTAAGTTGTTTTGCATCATTTAATAGTTGTTTCAAGTATGAATGTCTTGCCTTCCCAAGAAGATTAAAATAAGA
TTCCTTTAAGAACAGAGGCTCACTGCGCAGTGCCAGACATAGACATAGAGTAAACCACAACTACTGACTTCACTTCAAG
CTGACCTAACCATCTTCCCAGCGAAGACGGCCAACCTGGTGTATAACTCATTCTTCTGATCTGCACTTACTTTATAGAG
GAATAAATACACTGAGTTATTGGGAGTTTGTGAAGGAAGTGACTAGAATTTCAATAAAATAATAAAGTTTTGTTTTGTT
TCATTTCGTTTGAAAAGAAACTGCTGCATGGCCAAGATATTTGAAAATGGAGGCTGGGATTGGACAGGGGTGAAGAATT
GTGTCACAGACTTTGTACTGGAAAAATGTCTGCCTTAATCTAGTGAATAAATATGACTGTTCTTTGAAGTCCTTTTTTT
CCTCCCCGAGTATAAATTCAAATGCTATTCATTTTCTGAGTTGCCTGTATTTCTTTAGCCCTTAAGGCATCAACCTTTG
ATGTCTTATTTTCATAATATTTTCTCTCTTAGAACTGATCCACATATTCAGTAGAATGGAGGTATAAATCCTAATCCAT
AGACTACTCCGAGCTTATTGAAAGTGAATCTTATTTAGATTCTTTCCTTTATCTGCTCACTGACAGATCTAATGTTAAA
CAGAACCTTATTATCATCACAAGGAAGTAGATTAAAAAATACTTTTCAGTCATTCGTATTCAACAAGTACACTCCATCA
AATCTTGCCTAACTTTTTTTGCAAATAACTTTGCTCCTTGGATCCTCTCCCAGGTCTTTATCAAAATGGAACCACATAC
ATTTGTAACTACCTCATAATTAAAGTTTTGAGTCATTAAGTTCARTTATCTTTAAGGGTAAACATTGAATTTGCTGTAA
AAGTTCCATTTGTTTCACTAAAATTYGCAAATAGTTGTGATTTTCTTTGCAGATCTGTCCAGTTTGATCTTGAAACAAA
ACTGCTTAAAACTTTATCAGCCTTCCTTCTTTTTGGCTTAGCTTTAATAACCACTTTTAATATATAACTCAGATCTATA
AATAATACTGAGAAAAGCAGTGGAAAACATTGCAGGTATAAAGACTTTTCATGTTGACTATTTTTGGTAAAGATTCTGG
ACATTTGAGTGAAGTCTCTCATGTTTTATTGGTTTATTTTACTCTGGCACCGCTTATGAAAAAGGGGACTTGAATTACT
AGAGGGTAATTTTCTTTCTTTATTTTATTTATATATTTTTTACTATTTTTTTCCTTCAGTTATGTTGTTTATTCAAAAC
TTGAAAACATATACAATTTCAGGGTCTTCTAGAGTATATTTACATCATTCTGATGAACAACTTTATAATTTTTAAATTA
GCAAATATTCTCAACCCTGTCAGCTTTAATATTATAATTAATGTGCACAAAKCTGAAAACTTTTCTTGCTCATACTATA
ATACATTAAATAGACCTTAGCAAACAACTTCTTATTTGAATACTTGTCTGTCCCTGTCACTCTTCTCATACTTTAGCCT
CATAACTTTGGTTATAATTATGTAAATGGTTAATATTCATGTTCTCATTGCAAAATGAAAAGTGAGGAAGAGAAATTAA
GCCATTTGCCTAAGGTCACAAGTCTGGTAAAATCAACAGAGGCACTCAGAATACCTCCAAAATCATTTCCATGATGCCA
GAACCTTTAAATGCTACAGAAACAAGCTAAAGCGATGCATTTAAATGTGCTTCTATGTAGGGCTTGAGCTGTATCTAAA
CTTAAATTAGAGCTCAGCCAACATAGAATCTAGTTCAGCAATACTCTACAACATGAGATAACCATACTGATGTTTGATA
TAAAATGAGATTGCAGAGGAAACACATTTTAATACCTGAGGTGTGTGCTTAATCTTCTTGATGTATATTAAAAGCTCAG
TACGTGAGAGTAATATGAGGTGATGGGGTTTACTCTTAAAGAGATTACTAATAATGTTTATTTGGAAAAAGATGAAGAT
TTTAGAGGCTATTTAAGAAACTGGTTCTGGGAAAACCAGCCATAACTTAAGAGTTCTTCTTTCACCCAATCCCCTTGGA
ATTCTGCTTTGCTATAGAACCATGGTCAAACCAAGGCAAGCAGCACAAATTACATGAACAAAGAATACAACAATAAAAA
GCGGATCCTTAAGACCCTCCCAAGAAGACCAAGAGCTCTCTCTTTAAAACTCTGTAAAATACCTAGGTTCTCAAGTCTT
CCTATGTCTTATTTCTTAACTAATTGCACTATCAATTCAAAAATGGAACAAAGGATATTCTACGTATCAGAACCTTTTT
TCCTATACATTAAGAAGAACTTTTCCCACATGAATAGGTAATATCACAGTCTAAAGCCAGAGGATGAAACCTATGAATT
CTTCCTATCATATATTTTAACAAGAAACGTAAATATCTATGACCTACTTATAGCCAATTTATATTTTGCCCAGGTTGTT
TTGTTTCTAAACTTACCCCTCATATGGCTTAATAATGAAGGCCATAAATGTGCCTCTTTCCTATCTCACCCCTATGACT
TGACATGTATTATAAAATGAACTTCCTATATAAAATAATATTTATTGAATGAAAGGAAAGTATTACATACAACTTTCAT
TATTATATTATTAAGCTTATTTTTTGCACATCATRGCTAGATCATCTTAAAATAGTTTGGCTCTGTCTCTTTTCCCATT
TTTTTTTTTTATTATACTTTAAGTTCTAGGGTACGTGAGCACAACGTGAAGGTTCGTTACATATGTATACATGTGCCAT
GTTGGTGTGCTGCACCCGTTAACTTGTCATTTACATTACGTATATCTACTAATGCTATCCCTCCCCCCTCCCCCCACTC
CATGACAGACCCCGGTGTGTGGTGTTCCCCACCCTGTGTCCAAGTGTTCTCATTGTTCAATTCCCACCTATGATTGAGA
ACATGCAGTGTTTGGTTTTCTGTCCTTGCAATAGTTTGCTCAGAATGATGGTTTCCAGCTTCATCCATGTCCCTACAAA
GGACATGAACTCATCATTTTTTATGGCTGCATAGTATTCCATGGTGTATATGTGCCACATTTTCTTAATCCAGTCTATC
ATTGATGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATAGTGCTGCAATAAACATACATGTGCATGTGTCTT
ATAGCAGCATGATTTATAATCCTTTGGGTATATACCCAGTAATGGGATGGCTGGGTCAAATAGTATTTCTAGTTCAAGA
TCCTTGAGGAATCRCCACACTGTCTTCCACAATGGTTGAACTAGTTTACAGTCCCACCAACAGTGTAAAACTGTTCCTA
TTTCTCCACATCCTCTCTAGCACCTGTTGTTTCCTTACTTTTTAATGATTGCCATTTTAACTGGTGTGAGATGATATCT
CATTGTGGTTTTGATTTGCATTTCTCTGATGGCCAAGTGATGATGAGCATTTTTTCATGTGTCTGTTGGCTGCATAAAT
GTCTTCTTTTGAGAAGTGTCTGTTCATATCCTTTGCCCACTTTTTGATGTGGTTGTTTGATTTTTTCTTGTAAATTTGT

Fig. 9.195

TTAAGTTATTTGTAGATTCTGTGTATTAGCTCTTTCTCAGATGGGTAGATTATAAAAATTTTCTCCCATTCTGTAGGTT
GCCTGTTCACTCCAATGGTAGTTTCTTCTGCTGTGCAGAAGCTCTTTAGTTTAATTAGATCTCATTTGTCAATTTTGGC
TTTTGTTGCCATTGCTTTTGGTGTTTTAGTCATGAAGTCCTTGCCTGTGCCTATGTCCTGAATGGTATTGCCTAGGTTT
TCTTGTAGGGTTTTTATGGTTTTAGGTCTAACATTTAAGTTTTTAATCCATCTTGAATTAATTTTTGTATAAGGTGTAC
GGAAGAGATCCAGTTTCAGCTTTCTACATGTGGCTAGCCAGTATTTCCAGCACAATTTATTAAATAGGGAATCCTTTCC
CCATTTCTTRTTGTTGTCAGGTTTGTCAAAGATCAGATGGTTGAAGATGTGTAGTATTATTTCTGAGGGCTCTATTCTG
TTCCATTAGTCTATATCTCTGTTTTGGTACCAGTACCATGCTGTTTTGGTTACTGTAGCCTTGTAGTATAGTTTGAAGT
CAGGCAGCGTGATGCCTCCAGCTTTGTTCTTTTGGCTTAGGATTGTCTTGGCAATGCGGGCTCTTTTTTGGTTCCACAT
AAACTTTAAAGTAGTTTTTTTCCAATTCTGTGAAGAAAGTCATTGGTAGCTTGATGGGGATGGCACTGAATCTATAAAT
TACCTTGGGCAGTGTGGCCATTTTCATGATATTGATTCTTCCTATCTATGAGCATGGAATGTTCTTCCATTTGTTTGTG
TCCTCTTTTATTTCRTTGAGCAGTGGTTTGTAATTCTCCTTGAAGAGGTCCTTCACATCCCTTGTAAGTTGGATTCCTA
GGTGTTTTATTCTCTTTGAAGCAATTGTGAATTGGAGTTCACTTCKGATTTGGCTGTTTGTCTGTTATTGGTGTATAGG
AATGCTTGTGATTTTTGCACATTGATTTTGTATCCTGAGACTTTGCTGAAGTTGCTTATCAGATTAAGGAGATTTTGGG
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AATACCCTTTATTTCTTTCTCCTGCCTGATTGCCCTGGCCAGAACTTCCAATACTATGTTGAATAGGAGTGGTGAGAAA
GGGCATCCCTGTCTTGTGCCAGGTTTCAAAGGGAATGCTTCTAGCTTTTGCCCATTCAGTATGATATTGGCTGTGGGTT
TGTCATAAATAGCTCTTATTATTTTGAGATACATCCCATCAATRCCTAGTTTATTGAGAGTTTTTAGCATGAAGGGTTG
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ATTACATTTATTGATTTGCATATGTTGAACCAGCCTTGCATCCCAGGGATGAAGCCCACTTGATCATGGTGGATAAGCT
TTTTGATGTGCTGCTGGCTTCGGTTTGCCAGTATTTTATTAAGGATATTTGCATCAATGTTCATCAGGGATATTGGTCT
AAAATTCTCTTTTTTTGTTGTGTCTCTGCCAGGCTTTGGTATCAGGATAATGCTGGCCTTATAAAATGAGTTAGGGAGG
ATTCCCTCTTTTTCTATCGATTGGAATAGTTTCAGAAGGAATGTTACCAGCTCCTTTTTGTATCTCTGGTAGAATTCGG
CTGTGAATCCCTCTGGTCCTGGACTTTTTTTGGTTGGTAGGCTATTAATTATTGCCTCAATTTCAGAGCCTGTTATTGG
TCTATTGAGGGATTCAACTTCTTCCTGGTTTAGTCTTGGGAGGGTGTATGTGTCCAGGAATTCATCCATTTCTTCTAGA
TTTTCTAGTTTATTTGCATAGAGGTGTTTATAGTATTCTCTGATAGTAGTTTGTATTTCTGTGGGATCAGTGGTGATAT
CACCTTTATCATTTTTTATTGCGTCTATTTGATTCTTCTCCCTTTCTTCTTTATTAGTCTTGCTAGTGGTCCGTCAATT
TTGTTGATCTTTTCAAAATACCAGCTCCTGGATTCATTGATTTTTTGAAGGGTTTTTTTGTGTCTCTATCTCCTTCAGT
TCTGCTCTGATCTTAGTTWTTTCTTGCCTTCTGTTAGCTTTTGAATGCGTTTGCTCTTGCTTCTCTAGTTCTTTTAATT
GTGCTGTTAGGGTGTCAATTTTAGATCTTTCCTGCTTTCTCTTGTGGGAATTTAGTGCTATAAATTTCCCTCTACACAC
TGCTTTAAATATGTCCCAGAGATTCTGGTATGTTGTGTCTTTGTTCTCATTGGTTTCAAAGAACATCTTTATTTCTGCC
TTCATTTCGTTATGTACCCAGTAGTCATTCAGGAGCAGGTTGTTCAGTTTCCATGTAGTTGAGCGGTTTTGAGTGAGTT
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GAGGAGTGCTTTACTTCCAACTATATGGTCAATTTTGGAATAAGTGCAATGTGATGTTGAGAAGAATGTATATTCTGTT
GATTTGTGGTGGAGAGTTCTGTAGATGTCTATTAGGTCCACTTGGTGCAGAGCTGAGTTCAATTCCTGGATAACCTTGT
TAACTTTCTGTCTCGTTGATCTATCCGATGTTGACAGTGGGGTGTTACAGTCTCTCTTTATTATTGTGTGGGAGTCTAA
GTCTCTTTGTAAGTCTCTAAGGGCTTGCTTTATGAATCTGGGTGCTCCTGTATTGGGTGCATATATATTTAGRATAGTT
AGCTCTTCTTGTTGAATTGATCCCTTTACCATTACGTAATGGCCTTCTTTGTCTCTTTTGATCTTTGTTGGTTTAAAGT
CTGTTTTATCAGAGACTAGGATTGCAACCCCACCTTTTTTTTGTTTTCCATGTGCTTGGTAGATCTTCCTTCCTCCCTT
TATTTTGAGCCTGTGTGTGTCTCTGCACGTGAGATGGGTCTCCTGAATACAGCACAGTGGTGGGTCTTGACTCTTTATC
CAATTTGCCAGTTAGCATCTTTTAATTGGAGCATTTAGCCCATTTACATTTAAGGTTAATATTGTTATGTGTGAATTTG
ATCCTGTCATTATGATGTTAGCTGGTTATTTTGCTCATTAGTTGATGCAGTCTCTTCCTAGCATCGATGGTCTTTACAA
TTTGGCATGTTTTTGCAGTGGTTGGTACTGGTTGTTCCTTTCCATGTTTAGCACTTCCTTCAGGAGCTCTTCTAGGCCT
GGTGGTGACAAAATCTCTCAGCATTTGCTTGTCTGTAAAGGATTTTATTTCTCCTTCACTTATGAAACTTAGTTTGGCT
GGATATGAAATTCTGGGTTGAAAATTCTTTAAGAATGTTGAATATTGGCCCCCACTCTCTTCTGGTTTGTAGAGTTTCT
GCCGAGGGATCAGCTGTTAGTCTGATGGGCTTCCCTTTGTGGGTAACCYGACCTTTCTCTCTGGCTGCCCTTAACATTT
TTTCCTTCATTTCAACTTTAGTGAATCTGAAAATTATGTGTCTTGGAGTTGCTCTTCTCGAGGAGTATCTTTGTGGCAT
TCTACTAGAGGGTAATTTTCTTTTAGGGTGTTATAATTATTTTAAAAATTGATTCATTGGAATATGTTATCAATGTCAA
AACATGAGATAACTTGATGATTATCTCTTTATGAATTTGAGGTGCTGAGTATTTCTTGTTTTTCAATTACAGCATTCTT
TCAAATAGCCAGTCTCATGTTTCTATTTCTCTCTTAGCTGCTTCTTTCTTTAATATTTTGTTGCTAATGAGAACCTCTA
CCAAAATGAGTAACCAAAGGGCTGAAGAAAGTTGAACTGTTAAATGGTGTTTGTTAATTGCTTCTTCAATTACAGAAGG
ATTTTATATGTTGAGTAACATGCCATTTGAAGATTTGACAATTCCATCCTCTCCTTGGTAACTCCCCAGTCATTTGGTC
TAGATTGATCCATCATCTTTCTCACTTAAGAGCATTTAGTTCTCACCTTCAAATAATCAGCAGATTAAAATAGTGGTAC
ATAGTCATCTGTAGGAAGAAAGAAATAAGCTGTACAGTAGAGTGCTCTGTGGGTAAATATTTGTTGTGTTGAGATATAA
CCTGTGTATATTTATTAAATATCAGTGACATTTCTTTGCTTATTCTTTCATTCACTCAACAGATATTATTGAACAGCTG
CTGTGTACTAGGCATTGTTCATTTTCCCAAATTCTAAAATTGTGATCATTTCTATTTTAAAATGTATTATTTAACAAA
GTACTGGTAATGATATATATCTTTATTTCCCAGTGGGTTTTGGCAATATAGCATAAAGATCATGAAAGTGGGCTCTAGA
ATCTGAGAGCCTGTGAAAACTTCAGCTCCAACACTTTCTAGTTGTGTGAGCGACTTTAGGCAAGTTAATGAACTTCCCT
AAGCTCATTTACTTCATCTTTACAATAGGTATAATAATAGTACTTACCTCATGTCCACTATCTAAAGAGTAAATGGGAA
AATATGCAAAGCATATTGCACTGGGCTTGGCAGGCAAGTAATCCCTCAATAGATGTTAAATTTGCTGCTGTTATTAAAT
CATAGTTCTTGCTTAGTTGATTGTTATAATCTTTTTCAGTATTTATTGAACAAATACCTATGAAGTGTACTCAGAGTAA
ACTTGGACAGTGAGAGACACCACCATCTGGCCTGTTGTGTCATAAACAAAAGCCTTAAAACTGGGTCTTGGCAATGGTG

Fig. 9.196

AGGGGAACAGATGCTCTAACTGCCTTCTAGAATGTGTTTTTCACTATGTGTCTAAGCTGCGATGAATGTCACTAATGTC
ATCTCTCTTTCTATTTTAGGTAAGTACATCACCATTTTTGAAACTCTGTGCAGATGGGTAAGTCTTGCTGCTGGAACTT
TTCCTGTTGATTTGCATACTTGGAGGATCTGGATCAGACAGTGTGCTTATCGTGGTCAGAAAATGCCTTTATTTTATTC
AAGCAGAGATCTGGAAAGGTAACAGAATTTCCCACACATGCTTTCCATCTCTGTTTCAAATCTTTGGCAGAAAAAAAAA
ATCTGTTATTTTTAATTAGATAAAATGCTATGTTAAATAATTGAAGATTTAATTTCTTACTCTGTCAATAGAAGGCAGA
GTAGTTTAAAAGACTTGAGAAAAGAAAAACAATTGTTTRCTTCCTATTAGAAATCACAAAATCCTCTCTGAAGTAAACA
TACAAATCTTTGTTTTTCTGCTTTCAAACAGGGAAAATTTTTTCAGTGCCTAACAAACAGGTGTTTCATGATTAGATTA
TTAATGAGAAATAATTTTGTATCAAATAGAAAAAGTGACAAATGGCCCTGCAAGACCWTGTGTGCATAATATTGTAGAA
GGAATTCCTGTTATGACTAAGAGTTGATGTAGTTAATTTAGTATGTCTAAAGTTGGCTGTAATCTATCACCACAGAAGA
GCTGGAAGAAATGATCTTAAATCACAAAGGATTTAGTAAAGACCTACGTGAGCTGTGAAAGATGATTAAACTATGAAAT
AGTTCTCAAAAGGAAGTTATAAATTCCTTGCCACTTGTGAAATCTAAAAACTACATAGACAGTTATGTTCRTATTAGAA
AATAAAGATTTATCCTGCCTTGGCACAATGTATTGAATTGGCATGTTGTTCTCAGTAACAAAGTCCCAATTTGCTTCAT
CAGCTTTAATTCCCTATTTACTCCATACATACTCTATACTCTATGTGTTAGTCTGAGTCTTGCAAGAAGCCCATGCCAA
AATGGGATTAGAAATGCAAGAATTTTAGGAAATGCCCTTGTAGAGGAATATAAGGAGGGAGCCAGTTAAGGCTGAGGGA
AACGTCAAAGCATGATCCAAGTTTGACTCTGAGTAAAGAAGGGAGAGAGAATTGGTGAGAGCATCCTTGATTGGGCTAG
CCAAAGGCATATGGGAGTCCTCAAGCCAAAATCAGCCATCAGAGGAATCCTGTTTCCCAGGAATGTGTCTGCCACAACA
TGCCCTCTGTGCTCAGTAAATACCAGGAAGCAGGGCATGGAGGTATGGCCTTAGCTAAAATGTTGCAGTGAATTTCAG
AGGCATCAGTTGGGGCCCTTTGCTGGTTATAGTTCCTATAGTTGGAGGTCTGCAGCATATCCTCACGGCCCCACACAGA
GACTGTTAGATCTTGGTTCTTTCTGTTTCTTATTTTCTATTACAATGCCTTCTATCTCCACATCTTACTCATTCTTCAT
GCCCAAATCAGTTACCACTTCCTTCATGAAGGTTACTCTGTACAACCTAGTGGCTAATAATTACCATTCTCTTTTGTAA
TTCAAAAATTCTTGTATTTTTCTGTGATATTTATTGTTTTTTGTTATCCATTTATTCAAAAAAATGGTATCGAGAGCTG
CATTTGTGCTAGCCACTTTTCTATGCTCTGTGGGGGAGAGGATCAGAAAAAAATGATAAAACATGACAGTCTAATGGAA
AAGATAATACTGTAGAATACATTAAAATATGACAGAAATGTTTGAAGTATGAGCAAAAGATATGAGGAGACAGAAGAAG
GAAGAATAACCTTTTGGGAAAGAAGGGAGGGCAGTGCTCAGGGAGGGATGGAGGATTTAAAGCAGGACTTGACATTGAG
TTTTGTCTTGGAGGGTGACTAGCTCGTTAGGAGTTGACAGTTGAATAGGCATCATTTTCAAGTTCATGGTTATATGAAG
GAGCATAGAAAAGGTTTGTAGTACAGAGAGCCTTGCATGTCATAGGGAATTTATGGGATTACGGTCAAAGAGAAATCTG
CAAAATTGGCCTAAAGCCAGATTATATGGGGCATCGGGTCTTGGCAAGTAGTTTGGACTTTATTCTATGAGCCCAATCC
AATTCAGAACATCTCAGAGTCATGTGGGCCAGGCTGAATGACAAAAATATTGATGTATATAATTCTGTTATGGCATACT
AAAATGGTATGATTCTACCAAACAAAAAAGATGGTGATACTATATATTTAAATATGTTGTCTATATCTAAAAACTACTA
ATAAATTACAATGAAGAAATCACATTTTGATAAAAGAAGATAAAAATATAGGGCATAAGGCCAAAATGTAATGGAACGA
TTTAGCAGACTCTTAATCTCAGGTGTGAGATTTGTCACGAATAGCTATTTTCTGCTCGATATATATTTACTTTCTGTAC
AGTGTGGTTATAAAGACATAACTGAAAAATCTAGTTGTCCTCGAAATATGTAAGGTATCAAAAAGCAGGATTTTATGCT
GAGTGTGCTTTATAATATTTGGAAAATAGTTATAACTAGTTGAAGCATTCACCAGAATGTCACTTGACAATTCTAACTT
TAAATATCTATAAGCCATAAAGTTAATATATTATATTGATTTTGATTTTTAATTTGATGTAATTTCAGATTTACTGTAA
AGTGGCAAGAATAGCACAAGGAATTCCCAGATACCCCTCACCAATATCCCCCAAATGTTAACATTTTACTACATTTACT
TTATTCAATCTCTGTCTCTCATATCTACCTTTCTGTCTATCTAATCATCTATGTATCCGTCTACCCATACACACGTTTC
CTTATTGATACACATTAAGAGCAAGTTGCAGACATGATACTCCTTTGCTTCTAAATACTTAAATAATTCCTAAAAACAT
GGAATTATCATACATAGGTACAGTTCAGTGGTTAAAATTAGCAAATTAACATGGATAAAATGTTGTTATCTAATCTACA
GACTTTATTCTAAATTTCAATAATTGTCCCAATAATGTTCTGTGTAGCCAATGAAATTACAAAATCATGCTTTTCAATC
AGTTGTCATGTCTCTTTAATATCCTTTAAACTGGAGCAGTTTCTGAGTCTTCGTGAAAGACTATTTCATGACATTTATA
TTTTTGGAGAATTACATGCCAATTGTTTTGTACACTCTCTTGATTTATTTGGGCTGCTATAACAAACTACCATAGTCTT
CATGGTTTATAAACAACAGAAATTTATTTCTCATGGTTCTGGAGGCTGAGAAATCCCATGATCTGTGCTAAGCAGATTT
TCTGTCTGGTGAGGATCAGCTTTCTAGCTCATAAATAGCTGTCTCCTTGCTGTGTTTTTACATGGCAGAAAGGAAGAGA
GAGTTCTCTGGGGTCTCTTTTATAAGGGCATTAATCCCATTCATGAGGGCTCTGTCCCCATAATCTCATCACTTCCAAA
AGGCCACACCTGTAAATACCATCATATTGCTGATTAAGTTTCAACATATGAATTTGGAGGCAACGTAAACATTCAGTCT
AAAGCATAGACTATCTTTCAATTTGAGTTTATTTTGTGTTTCCTGGGGATGATAGTCAGGTCATACAACTTGGGCAGGA
ATATCACAGTAGGGATGCTAAGTCCTTATATCCAGAGGTAGATGCTGTTGTTTAGTACCATTACTGACAATTTTAGCTT
TGATCATTTAGTTCAAGTGGTGCCTACCAGATTTCTCCACTGTAAAGTTACTATTTTCCTCCTTTGTAATTAAAAAGCA
TTTTGTACCATGATAATATGAGAGCATGTAAATATGCTGTTATTCCTCAATTTCTTACCCAATAGCTTTGGAATCCGTT
GGTGATTCCTGTCTAAATCAGTTACTTGTGTTATTATGATGGTTGCTGTTTTCATTGGTTTAATGCTGCCGTAACAGAT
ACCACAAACTGGGTAATTTATAATGAATAGAATTTATTTGGCTCATGGTTCTGGAGGCTGAGAAGTTCAGGATCAAGGG
GCTGCATCTGGTGCAGTCCTTTTTCCTGCTGCATCATGACATGATGAAAGGTATCACATGGCAAGAAATAGGGAGAAG
GGGGCCAAACTCATTTTTTTTTTTTTTTTTTTTTTTGAGACAGAGTCTCGCTCTGTCACCCAGGCTGGAGTGCAGTGACTC
CGCCTCGGCTCACTGCAACCTCCACCTCCCGGGTTCGCCATTCTCCTGCCTCAGTTTCCCGAGTAGCTGGGACTACAGG
CACCCACCACCACGCCCGGCTAATTTTTTGTATTTTGTTTAGTAGAGACGGGGTTTCACCGTGTTAGCCAGGACGGTCT
CCATCTGCTGACCTCGTGAGCCACCCACCTTAGCCTCCCAAAGTGCTGGGATTACAGGCCTTAGCCACCGCACCTGGCC
CAAACTCATTCTTTTATAAGGAACCTACTCCTATGATAACAGATAAAGTAATCCATTCATGAAGGGAATGCTCTCATGA
TCTAATCATCTCTTAAATGTCCCAACTCTTAACACTGTTGCGTTTTGGTCTAAGCTTCCAAGATGTGAACTTTGGGAGA
CATATTCAAACCATAGTGGTTTGCTAAGGGGAAATCTTGTAATTTCATCATTTCTTCCTCTTTTATTAGTTGGCTTTCT
ATTATGCATAAAAAATGTTTCTTCGTGCTTGTTTCTGTGTGGAGTCATGAATTCTTTATTTAGCAGGTTGTTATCCTTTA
ATATTGTTGGTTAATATCATTATTTATCTTAATCCTCATACTGTCCTGGATTTGGACAGTACAAGGTACTTCTAGTTGA

Fig. 9.197

CTCCCTTGTCATTTTAACACGTTACTATCATTCTTTGAGTACTTTTTACTTTTTGGTTTAGATATGAGACTCTTGTT
CTTTTATCCAAGCCTTGGAATCAGCTACTTTTATAGGGCTCTCTGTTTCCTTTCAGTAAAGAATGGTTTTTAGAAATCA
AAATTTGGAGAGTAGGTGTGCTTTTGCTTCTAGGTCCTTTTAGTAGACATATCTAGGGGGAAAGTGTATGTATGTACAT
ACTCATATATAAATGTGTGCATATATATGCATACCCACACATACCTATATCCATGGGTATATTCAGATATTTGTATACA
TTAAACCTAGGATTTCACAATGATAATCCATCATTGCAGTGCTCATTCTGTTCTTCTCCATTTTCGTATCTGTAACTCT
GTGAGAAGTTACGGTGAGAAGCCTGGCTCCCATTATTCACAATATATTATATATTGCATAGGATTTTCTTACCTGTGGA
ATGTGGTTTCAAAAATTACTTTCAGAATTACCCACTCACGCCTCTATGGAAAAAGAGAAGTAAGGCAAAGAAAAGTATT
TCAGTAAGTAGACTTTTAGCATTATTTATGTTTTATATGCCTAATTCTGTACTCAAAATTCACTTGGTTAGTTCTTTTC
TCACAGCCACTTCCACTCACTTCACGGTTCTGTTACTTATTTTAAATATGGATCAGTTAATTTGTTTTAATATATATAAAT
TTGTTTTCATCTAGAGTTGAATCGATTAATCTGGAATGATATTTTCTGTTTCTATGTTTAAAATATCAACTAATAATTT
CCTTTCCTTAATAATAAGAAATCTCTAGCACCATTTAAGACTCAGTTAACTGAGGTGTAGGTATCCATGTTTTCCTAGA
GTATAGAGCTGTGATCTAAATCAGAAAATCTGAACAAGTTTGTCTTGGACCAAACTTCAGGATAATCTGGAAACAACGG
GACAAATGTTAGTGCATGAGTATTTTCAAACATAGTTCTGAGTAAATTCCAAATGCATATGTGGGTTTGTGGCTCTTCA
TATCTGGTTATTTGTACATGATCACATCTTTATTGTAGATAATAAAAGTTGGGTATAAAAGCAATGCCATTAATTATGT
ATTTTTTATGCTTTTTGTTTCAAAAAAGGAATTAAGCAATCCTAACTTTAAAAATGGATAAAATGCCTATGTAAAGCTA
AGTTAGAAACACAAATGTAAAAGTGTATTTCGTACTTGGAGTTAAGTTTAGGTCTTAAAATATTAATAGCTTCCTCAAA
GATACAGCAAATAGAGAAACCTGATAATATTTATGTCTTGAGAGAAAATTATCTTTCTATAATTAATTATAAGACTTTT
CATTAGGGTCTTTGTGTAAAGTAAAGCAATAATATGTTTAATAGTATTTTTATGTGAGTTACATACATGTACATTATTA
ATCATGAATAAATAGTGATGTTCTTATACTTAGTCTTGTTATAAGTCAAAATATTAAATCATTATTCCATGAAAGTCTT
CATATAGTAATTTAAATCATTGTTAAGTCTGGTTACTTGATGTTGAGAAAGAGCTTAGTACACATAGTAGAATGACTTG
CCAGCCTTGCCATTAGGTTATCTTTCTCATACATTACTTACCTTAAGTTGGCAGGAGCTTGATTACAGAAGATAACTGT
CATTTATCTCTTTGTGTGGAGTGCATATATTGTGGGATGTCTATAGGAGTATTACCCAAAGGGTTTGTATTACAGAATT
ATAGTTAACAAAATCACTAGGAAATGTTTATGGAGGGAAGATAACCACAGATATATCTGATTACCTATTTGGAGGACTA
GCAGTGGAATTTCTTGCTGTTTCTCATGTGGCCAAAACTAATAAAATAAAATAAATTTAGAAGAGTTTTGTTGTACCAA
GATAATCCATATATTTCAGTTGGTATGGAAAAACATCTTTTCTTTCAGCCATTGTTACTATGACACTTAGACACTCTAG
TCTACAAAATTATCCTAGGTTTAGCAATATTGGAATTAAATTTTATTGTTCCTTCCTGATTGCAGAGTTATAAAAATAA
GGATTGAGTTATTATGAGAGGCCGATTGTGTAATACATATCATGAGTTAAAAGTAAACGTTGACTTTTATTATAATTGC
CTTTTGCCACATGAGAGAAAATAAACTAAGTGAATAAGACTGTCTCTAAGTCTTCTCTGAGATTAATTTGACAATTTAC
TAGAAATAGAAAGATTGGTAATGCTCAGTCTAGGAAAGGGGTAAAGAAACAGGCACACATATATTACTTGAGAGATTGT
AAATTTTGTACAGTTACAATGGTAACACTCCATGTCAAAATATGCATATAACAATGCCTCTTGTAGACATTTATCCTCA
AGTAACAAGAAGTAGGCAAAGATTATTTTATGTATTTTGACCGTCAATGAGTTGATAATAGTAAAGGACTAGGGAGGGT
TGGTGTTTAAAACAGGCCAGGTGCGGTGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCAAGGCGGATCACTTGAG
GTCAGAAATTTAAGACCAGCCTGACCAACATGGTGAAACTCCATCTCTACTAAAAATACAGAAATATCCAGGCACTGTG
GCAGGTGCCTATAATCCCAGCTACTCAGGCGCCTGAGGCAGGAGAAGTGCTTGAACCCCAGAGGTAGAGGTTGCAGTGA
GCCGAAATGGTGCCACTGCACTCCAGCCTGGGTGACAGAGCCAGACTACATCTCAAAAACAAACAAAAAACTAAAACAG
ACTAAATTGTGGTACTTCCATATTTTTTTAATGATAGAGATATTAGCATTGAAATTTGTCACAAAACTACACATAATG
TAATTCTTTACACATTTTTAAGTATATGGGCTAAAGTATGAAACCAACTCTGAGTAATAGGATTATAAATATTCTTTAT
CTCCTTGTATTTATATTTATTTATACCTTAATTAAATTTTGAAATAATGTTGTTACTTTTACAATAAGAAGTTGTGAAA
AACTATTACCATGAAAATAATCTAGCAAGAATTTGATTTAACATTGCTCATTTCTTGAAAGCAAGCCAAGACATTTTTT
TTTACTCTTTTTGAGACTGAGTTTAAGGTATTTGATCAATTGTTAGAGGATGAGTTTATCATTTAGTGCCTTGCTGAT
TTGTGCAGGCACCTCAGTTTTAAGTAATCATGGGATTATTTATTTGTTGATTTAGCATTTGTTCAGTACTTATGTGCTT
AATAGCACTTGAACATACAAAGAGAAATGAGATTTTTGGTCCCCAAGAATTAAAAATTTAATGGAGGAGATAATCATAA
ACTTACAGAGAAGTATATGATAGGCTGTGTCAAAGTGGGAACAATGTAGACTAGGGAAATACAATGCTTCTCTTGGATG
GGTCACACCTAGGAGGGGCCAAAGGGGACAACTCACTGGGTATTGGAATGATCTGGATCCCTGGATTACTTGGTTGGTG
CTGGGCTGATTCGGAAACCCTTTCTATTTTCAACTCTTCTGCTAAACATCATTATAGTAACATCAGTACACATCCTGCT
GTTACCAAGTGTCAGTGTTTGGTCAGTTTGAGTTTTACAGGCATATAGAACTGCCATTTTGTCATTTCTGTCTACATTG
TACAAAAAAGTAATTTAACTGAGCTTTATAACTTATGATTTGGAGAACTCCACAGCTCCCGTTGTTCTTTCTCAAAAAA
TTATTTTCAGTGCAACTTAGCTTTCTGTGTATCTCCATTGCTCATCTGCCCTAGATGGTTCAGGTTGGTTGCTGTCTCT
ATTAGTGTGACAAGAGTTAATAAAATGATTAATTAAAAAGAGCCTTAAACGTCTACTTAGAAAACACTAGATAAATGCT
AAGTAGGGTGCTTTTTGGTGGATCAAGAGAGTCCAGATCACTAATATATGGATGGCGTATAAATTAAATCACTGTGTAA
GACTGCAAAATGTCAGAGAAACATTTTAATATGTTCCCCCCAGCATTTGCCTTTCTGTACATATGTCTTAGAATTATAA
TGCCTACATTTTAACTATGGTTTTCTGTGGGTATATATACAAATAGATAGCAACTGATTAAAAAAAAAGATCTCAACTT
TTTTTTTTCAATTCACAAGATTGGAGTATTTGGAGATAGGGCTGTTTTTTCTCTTTTTTTCCTTTTAAAGCCATCCACA
TTTTCTTTTCTACTGCTTTCTCACTCAAAAAAATGTAAGCTAGAAAAAGTTGATCTCATGGAAGTAAAAAGGAGAACAGA
GATTACTAGAGGCTGGAAACAGTAGGGAGAAGGGGAGGATAGAGAAATATTTGTTAAGAATACGAAATGACAGCTAGAT
AGGAGGAATTAAGTGGTAGTGTTCTATAGCACTATAGTATGACTATAGTTAACAACGATATATTATATATTTTCAAATA
CTTAGAGGATATTGAATAGTCCCAAAGAAATGAAAAATGTTGGAACATATGCTAATACCCTGATCTGATCACTATGCAT
TGTATGTATTGAAACATCCCTACGTACAATTATTATGTATCAATTTAAAAAATATCTAAAAATATATGTGTACCTAAGT
GTATACACCTTATATATCCTTTGATTTCCTTATGAAACACAGCATAGTTTGAGATTTAAAATGAATAAAATGGTTCTTT
ATGCTCTGTAAAATTAGAAAATCCTTCAGCTTTTAGAAGCTCTCTGTTGGTTTATTAGTTGATCACAAATTAATATGTC
CCTTTGGTTTAATCTGTATCATAAAACAAAAGTTGACTGTTCCCAAACATGTGCTTGGATAAGAGAAAGCTGTTAATAA

Fig. 9.198

ATATCTATTGACTGAATGAAAGTATAAATGAATAAATATTTTTAGCCCTTAGAAATATGTGAAAAATACCTAGAAAATA
TTAGACATACCAAGGTCAATGCTAAATGTAAAATGTATTTCTAAGAAAACTCTAAGTATGCAACCATATGGATTGATTA
AAACTAGTTACTTAAAACCTCTTATGACTGTATTTTTCTTGTTTTTGAAAAATAAATGCAGTTTGCACTCTCCTTGCTT
AGAACTTACGTATTCTATTTCACAAAAGTGCATGCTTGTGTTATTAAATGTGTGTGTGTGTGTGTGTGTRTATACATAT
ACATATATCTTGATCCCTAATCTCAGTTAGCTCCAAAGGTGTTCTAAATATATAAATGTTATAGGTCACAGTGTGATCT
CTTAACACTATATTTTTTGGTTGAGTGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGCGGCTGAGGYGGAAGGAT
AATTGGAGCCCAGGATTTTGAGATCAGCCAGGGCAACATAGTGAGACCCTGTCTCTACTGAAAATACAAAAAAATTATC
CAGGTGTTGTGGCACGTGCCTGTAGTCCCTGCTACTTGGGAGGCTGAGGTGGGAGGATCTCTTGAGCCTGGGAGGTCGA
GACTACAGTAAGCCAGGATTGCGCCACTGCACTCCAGCCTGGGTGACAGAGTGAGAGACCCTTTTTCAAAAAAGCCTAC
GTTTTTCACCAACACATTTCAAAATTACTTTTAAAATTATTATTGTTTTTAAAGATAGGTATGTGCCAAAATTAGAACT
TTGGGTCCAAGAGCATCTCCACATTCACATAAAGAAACTTAAGTTCAGTAACTTGCTCAGGCTATAAAGTAGAAGAGTT
AGGATTTGAACCCAGGTCAGAGGGCTCCAAAGCCCTTTCACTTTCCATCAAAAACATTTGATATTTTGCCAAAAATATC
ATGACTGTTTGTCCATTKYCATTTCATATCCTTCAAACAGCTATAAAGTGTGGAGAAATGATAACTTCATAACTCACGC
TACAGCTCGCAGACACACTTAATTAGCTTAGGGACAAACAGTTGTGACATTATGAGTGGGAGTTGCAAGGCTGAGTTGA
ATGTACTGATGGGGATGTTGGTTAAAAACAAAAAGCCATTCTATTCTACATCGTGGCAATCTTTGTACTTCAAAAGTAG
TAGTATTCTGAGAYGTTTACTGTGTATTATAGAAAAATTGCTGATTTGAATCACAATTCAGCAATACTAGAGAAGGAGA
AATCTACTTTTTCTAAATTTTCTCTACAGTGAAATAAAATGCTTTTGGAATATTTACTTGAGGAATGGGTTATCTGAAT
GTTCTCACTGAAACTCATTACACCGTATAGTGAAAATCTAGTTACAGGTAGTTGAAGTGTAGGTATAGATAGTATGTGA
TTCATAATGACGCATGTATGCCATGATTTACCTCAGTCACTGGACAGTAAGAATGTGATTAAGGAAGTTTCCTCTGCAA
CATTTCAAGATAAGTTAGCTGTTTTGAGCCACACAAATATTAAACTATGCATTGTGGCCAAGTGCCTATAATGCCAAAA
GCACCTGTTTCAAATTGTGAGTAATATCTTATGTGTTACACTAYTGAAATCTCCTTGTTACAGAATATTAATACTACCT
ATTGAAAAGAGTAAGAAATAAGAGTTTCTCATTTCCACCCTTTTGGATTTATTTCATCAAATGATGTGTTGATGAATAA
TGCCCTTTCTGTAAGATGGATAACTCATGGAAAGAAAGCCATTTGGACATGGATACTCAAGATTTTAAAGAATTTAGGA
GGTGGCAGTGTGAATATCAAATAAGGTGCCACTTGTAGAGAGAGTATCTCAGAAAAGGAGCAGAGAATCATACAATAGA
AAAGTGAAAAGCTGTTTCCTGTGGTAGATAGACTCTAAATAATGATTTTAGAGACAGACATAATAAATTAATTTATTGG
TTCATTGAAGAAACATCCTGAGTTCCTATGACATGCTAGGCATTGTGCTGGTGGGGGCGAGGGTTGGGTGAGTAGTGGC
GTATGGAGATGAAAAGATGCATCAGACATGGTCCTTGTCTTCATAGAACTTTCCACAGGGTAAAACTGGAAAAACCCTG
CTGGGACAGAGTGGGCATCTATTCCGGCTTAGGCAAGCATATCTTATCCTATTGATATCTGTACAATATTATCCTTAAA
CTAGAAATACAATAATATGTTTTATTCTGACAATGAGGAATAATTTTCCATATTAAGGAATAGGTTAATCTCTAAATAG
TATGCTATTTATTTTATCTTACTTTTTCCTCTGTGTTTTTAAATATTTAACAATTTAGGTAGCATCCTAGCAGGGCATC
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TTTTAATGAACCAAAAATATAGTTCATTGGAATTAAATGTTCCATGTGAAGATATTTATTTCGGAAACTACATGACTAA
ACCAATGGTAAGTTGAAGTTAAAAAAGTGACCCCAAGAGAGGGACAATGTCATATTATTATTGTTATAACCCATATATG
TTTAATAATGACCATGCAGGATGGTGCATATAGMAAATAACTAGGTAAAGTTTCTAGGAATTTTTATTCTATTTCTCTT
CTTTCAATTCTAATGTATGGGCCAACTCATCATTTTAATACAGAGCTTTGAGAGAAAATGCATAAATGTAATTTTCTGT
ATGATCACTAGATGGCGCCATGCTTCCCTTAGAATGAAGCTGCTCAGGAATTTGCAAGTGCAGTTCTGAGTATTTCACA
TAGAAACCTGGAAGATGAGACAATTGTATTTCCCATAAGGTTTTGATTCACTAATATCATCAAAACAACAATTAGCACG
TGTTACTTTGCATTCAAAAAGGGAGTAACGATTGGGTTTGTAAACAGTATATTGAAATAATCATTACTGAGGACAAAAG
TGAAGCATGCCTCTAAGAGGTAATTCGGAAGGTCTCTTTTGCTTTCCAAAAACATACTAGTAACAAGGAAACATCTTAT
ACTTGCTTGGAAAACTGGGTCCTAGTCAATGAGCTATGTCTTAAGGAATGGAAATACTGGCAAATGTGGTAAAGTTTAC
ATAGCCATTTTCTGCAAACCAAGAAGATAAATTGCATTCTGCCTAGTCTTAGGCAAACAGTTGGGCCATTTACTGTTCC
ATCAAAAAAAGGATTGTCAGATCCCCAAAAGCACAAGGATGCATATAGAGTGTCCATTTAAACTTCCTGATCAAAGATA
TACACTCGTGAAGGTGGAGTGGAAGACTTCTTTATAGGAGTATGATTCATGTTTATAAAATTGGAGACACTTAGAAAGT
TGAGTTAAAAGTGACTCAAAGGATATCTTTTCATTGCCCTTTTTATAGATGGAAAAACATGGATGTAGCTGTTTCATAC
AGCTAAGACACTAGTGCATCAAAACACAATACATTTGTGAGACATCTTGTTATGATTTCAAAGCAGTTTGTCAATAAAT
GTGTATGTTCAATGGTTACAGTTTGGGATGGTAAGACATCATCAGCTCAGAATAGTAACATCCTTCCCTTTATCTTTTT
TATAGAACTTTAAACCTGGATGCAATTTTAAGATCATATGCATCATTTTTTCTATATGGTGATTACATTCTAGATAAAT
TAATTTGTGATACACTCTGGACTTTTTRTATTACATCAAGTTGAAGTTTCCTTTTGTGGACTTAGAAACAAAAAATTTG
CAGTAATAAAAATGAAAAGAGATTATGCAAAAATAATTACTAATGACCATGTTTCTTAGGTGATGAATTTAATTGAGTG
TTGGTATTTTAAGAATACGTGCATCAAGCAAATTATAATGTAACCAAATATCCAGAGATTTGAGGAGGAATATCAGGTT
ATTATCACATTTCAGAGCTGAATTTTTCTTCTTTGGTTCATTGACTGCATTGAATCTTTGTTTTGTGGGTGATATAAAC
TTTTTCATTTCATTCCTTGCTCTAGGAGTGACTCTGGGGAATCATTAGGTACATGCTTGTTGGTTTTCCATAATAATTA
TCTCTGAGCCCTAATGGTTTCTGGATTTGGCCTCTCTTCACTTTCTCCAACTTTAGGCAGGAGTTCAGAATGGCCTTCA
GTTGCAAAGAGAAGTATAAATCCAACTTACCATCTAGTCTCTTTCTGTGTGGTCTTGGCAAATTTTTTAATCCTGGCTA
GGCATGCTGTTACTGGCAGAAATGAGGTTCTGCCTCAACTTTAGCTCCAGCCCTGCCGTTAGCCTGAAGACTTTCCAAG
ATTTAGGGAGGGTCCATGAATATCTCATCTTCAAGAGTGTGCTATAGAGTTATCGAGCAACTCAGATCTTTTAAAAATC
TTGAGTTTAGGAATCATACATTTAAATGTCAGTTCTCCTAGAAAATGAAGATTTTAATCCTTTAGAAAAAAATCTAGGG
ACAAGGAATTCTAGCATTTCCTAAAGATTCCATCATAAGTAGTGCTTTTAATGTAAAGGGTTTCTTTGAAAAAAATTAT
TTCTTTACTTTTTTTTTTTTTTTCCTTGAGACAGGGTCTCCCTTTGTCACCCAGGCTGGAGTGGAGTGGTATGATCATG
GCTCCTGCAGCCTCTACTTGCTGGGCTCCAGTGATCCTCCCACCTCAGCCTCTCAAATAGCTGGGACTACGGGCTCACA
CCACCACACCTGTCTCATTTTTGTATTTTTTGTAGAGAAGGGGTTTGGACATGTTACCCAGGCTGGTCTTGAATTCTTG

Fig. 9.199

GGCTCAAGTAGTCCTTCTGCCTCCATCTCCCGAAGTGTTGGGATTACAGGTGTGAGTCGTCATGCCTGGCTGTAAAATT
GTATTATATTTCTAATATGAAGAAATACTTGGTTTCTCTTTACTGTTTAGAAAGATAATTATCATGATTGTTTTCTTTA
TTAACTCCTATATGATACTTTGTATTTTTATCCCCTGCTACTCACCCCAAGCTTATTTTTATAATTAGAAAGGAATCAA
GCTAGCCAAACAGGAGTTATCCTTCCTTAAGGTAGAGAAGTTACTRTTTTTTTTCAAATGGCGATCTGCCTGCCTGAGT
TGCTATTTGGATCTCTGATGATTTCTTCCTTTGATCCCCTAACTCAAAGCAGGCAATCAAGGCTATGCTGTTAGTTGTA
ACCAGATGGAAACCTGATCTCCATTTATACTTTGCCTCTTGTATTGATAACAGGACATGAACCAGGATAGATACACTAA
CAGTATTTGACTCTGCTGCAGTTGCCAGGCTAAATAACCAGAACTCATATCTCATTCTACTCTACCTATGGAAACACTC
TGTATAATGAAAATGTGTGTTGAAAGTGTGTGGGTATATGTTGTGTGTATATGCATTAAAATTCTCATTAGCATGGGCT
GGTTGTAATAGTGCATACCTGTTATCCCAACTACTTGGGATGCTGAGGCAGGAGGATCATTTGAACCCAGAGTTCAAGG
CCAGCCTGGGTAACACAGCAAGACCGCCATCTATTTAAAAAAAAAAAGTAAAAACTCTCATGAGAATAATAATTAAAGT
AGCTATGTTGATCATTGCAGTAATTAAACCAAAATATTAATACTCATACCTGATATAGTTTTTTCCACTTTATTATAAT
TACATTTCTCTCAAAAAATTTAAGAATTAGTATATGTTTAACATATACAGGTTGAATATCTCTTATTGTAAATGCCTGG
GACCAGAAGTRTTTCAACCTTTGAATTTTTTTTTTGGATTTTGGAATACATGCATACACATAGTGAGATATCTTGGGGA
TAAGACCTTCATCTAAACACAAAATTTATTTATGTTTCGTATATRCCTTATAAACATAGGCTGAAAATAATTGTATACA
ATATTTTAAAATGCTTTCGTACGTGAAACAAAGTTTTGGCTGTGTTTTGACTATGACTTGTCACATGAGGTCAGGTGTG
GAATTTTCCACCTGTGACATCATGTCAGCACTCAAAAAGTTTTGGATTGTGGAACATTTTGCATTTTGGATTTTCAGAT
TAATGATGCTTAACCTACCTTGTGAAATAATGGAGTCCTTTATTAATAACAAAACAATAATAGATGATACTTACAGAGT
ACTTGTGTGTCAGGCTCTACTCTAAACATTTTATATGTATTAAACCAATTAATCTTCACAAAAACTCTGAATTAGATAT
ATTATTATTATTTCCATATTTTAGAGGAGAAAACTGAGAAACAAGTAATCTAGTCTGTACTCTACCATAATGCTATGTT
ACATTCTATCAACACTCCCACTGCCTCTTCTGAATTCATTGATAGTGGTGTGGTGGCATAGAGTCCACAGAGTGGAGCA
TTAATTAATTTTGCATAATGTGAAAGTAAAACTTAAGAAAATTTTAAGGAATAGACAGTGTGCAGTGTTATGGAATCAT
AACTATACAATTAAGGGGTTAAATGAAATCATGCCCAAAATGCTGTGTTTTAAATGGTGGCACTGACTGATAAAATGTA
GATTTGAGTTATTTATTGTTTCTACATTCTCAAGTGAAAAAGGAAGAAAGTAGGAATAAAATTCTGGACTATTGGGGGG
GGTGTCTTTAGTCTTGCAAAAAGTAAAAAATAGAAATAGAAGAAAGTTTTTATGGTTCATATTGTAACATCAAAATATG
GAATGAAAACTGTGGTCTCCCATGAAGTATTTCAGGTGCTGGAAGGAAATCTCCTAGACTAGGACTCTCAGCAAGTCCA
TGGTTCCTATTATGTCCAGCATGCCATAGAAAAACTCCAGAATTAGTTAAATWTTAATAATTTAATGGAGAAAACTAAT
TTTTCAAGGGGCAGCTAGTTAACTTCAGCATGAGTCAAAAAGCACTTCATCTGTCAATATTTATGTAAATATTTATTTT
GAATTATACATTTATTTAGAGTATTTATTTACATTAGAATAGAGGGAACTAAGGCCGGGCACGGTGACTCATGCCTGTA
ATCCCAGCATTTTGGGAGGCCGAGGCGGACAGATAACCTGAGGTCGGGAGTTTGAGACCAGCATGACCAACATGGAGAA
CCATGTATCTACCAAAAATACAAAATTAGCCGGGTGTGGTGGCAGATGCCTGTAATCCCAGCTACTTTTGGGAGGCTGA
GGCAGGAGAATTGCTTGAACCTGGGAGGTGGAGGTTGTGGTGAGCAGAGGTTGCAGTGAGCCAAGATCGTGCCATTGCA
CTCCAGCCTGAGCAACAAGAGCGAAACTCCATCTCAAAAATAAAGAATAAAGGGAACTAGCCATCTGATCATATTACAA
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ATGTCTAACTTGGAAGCAAAGTAATGGTGTGCACCTGTAGTCCCAGATATTCTGGAGGCTGAGGTGGGAGGATCAATTG
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CCACATTGTCCATTTCATAGAATTACTCTGTTTTTGTTGTTCATTTTGACATTTCCTAAGCTGTCACTTGACCCAGACT
GACACATTATCATCTGCATGCACCTAGGCTCTGCCTTATATATGTTTACAACATGCAATGAAGCCTAGTGCCTGTAATC
AGAAAGAGGGTGCTGCAGTCCATCATGTGAAAAAAGAGCTGGACTATGAATGAGGAAACAGATTTACTCTGACATCAA
GGCTGGCCGACAGCATCTGTCATGCCCCTAACACAATCATGCTAATTATAAGCCATCACTTTCATTCTTCTTGGAATTC

Fig. 9.200

AGAAGTCAGGAGGGTTGTAGGGGCAAATTTCTAACGGGTTGTGGAATCTATCATTGCTAGGACCTTTTACAATTCAGTT
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AATTAAATTATCTTCAGATCCCAGGGAATGGTAGAATTAGTCTTTTTGGCACTGATAGTAAGGTAGGTCATGTCTTAGT
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AGTCCAAAGTCAGCATGCTACAGATTTGGTGTCTGGTGAGGGCCAGGTTTCTGGTTCATTAATGGTGTCTTCTTGCTGT
GTCCTCACTTGGAAGAAGGGGCAAGGGAGCTATAACTTGGAAGAAGGGGCCTCTTTAATATGTGCATTAATCCTGTTCA
CAAGGCTGGAGGCCTAATGACCTAATTACCTCCCAAAGGCCCTACCTCCTAACACTATTGCATTGGTGATTAGATTTCA
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GCAATAATTGTTGGCTTCTGTACATGGGCAATATGGAAATTAAAGCAATCATAACATTTTGGTAGAGGACCTGAGGAGA
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TTAAGAATGGCAATCTAAGTGTACAAATGATGTTTAATTCTCATGAGATTTCATTTTAAACCTTGCTTTAGAGTAAACT
TTATGAGTAATAAGATTATACGTGTGGGAAACTGAAACTAAAAGGATTCAAATGGTTTTGACAAACAACAGATATTCAG
GGTCAGTGCAAATAAGGTTACAGATAATCACTCCATCTGCTCCATTGTCAGCAAAAATGAGGCCCAGGTGTTGCAGTAT
ACCTTGTCCTTTCTCCTGAATTGTGACCATTGACAAATAAGATTTTCAAAGAGAAGTCTGAATTCCTTAGGGTTTAGCC
TGAGCTCTTGTAAGAGTTTCTTTCCAGCCAAAGTATTTTCTTGTTTTCCTGTCAATTCAATGGGTTAGACCATTCCATC
CATTAGAAGAAAGTAGAGGAAATGGCTCAACCTTGCCCAGAGTACAGCTGGTTGGAACTCTGACAACGGAACTGTGGCC
CAGGGTAAAGAGCAAGAGGCTGGGGGAAGCACGTAATGCTTCTTAAAGCCTTTGATCTAAAATGACAGACTGTCATCTC
CACTCACATTCCATTAGCCCAAGCAAGTTTTGTGGCTAACCAGACAATGGGTCTCAGCAATATATCCCCCCTCCCAGAA

Fig. 9.201

CGCCTGAACATTCAAGTGGCAAAAGAGTGAATTGTTGAGAACAATAATATAGTCTATAATAGCATATAATGTTCATAAA
ATTAGCACCCCAGGCAAACAGGACAGAATGCCTATCCCCAGCCACAGCTTTATCCTGGCCTACAACGCTCATTTATACT
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AGTAGCCTTTTAGTTCAATTTGGCATCTTTTTTTCCTGGGTGATATTCTCAGTCCCAGGGGTTTGAATTCCAGACATCC
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GAAAGAGTTCATTAGAATAAAATACTATTACCTTCAGAAGAAATATGTATTACCAAGGGATGAAATGCAAAAGTTACTA
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AGTCTCAAACTCCTGAGTTCAAGCAATCCACCCATCTCGGCCTCCCCAAGTGGTAAGATTGCAGGCATGAGCTACCATG
CCCGGCCTACTTCAATATTTATTTTTTAATAAATCAAGTTTGTTATGAGAGAGTTGTCAGAGAATAGGAATCTTCTAAC
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TTGGCAAGATGGGGGAAAAAATCACAAGCCTTGTATGGAATTGTATGATTCTGCAGAGTTGCAATGGTGTTAACAATTG
TGACAAGTTACACTTTCTGAGACAATCTTCAATTTTAGCAATTAAAATAGCAAAGAATTATTATTTATAACAGTATTCA
TAACATAGCAAATGGTCATATTCCTTATAGAGACAGCACTTCCGAGTAGTCTTTATTTGTTTTTCAAATTTGTCCTTT

Fig. 9.202

CAATATCTCAAAATATCTTGTGTTGCAATTACATTTCCAAGTATATATTTGGTTGGGATGAAAATAGCTGTAATAGTAG
TAGTAGCTACCATTTATTGAATTCTTGCCACGTGCCTCATATTTTATGTGGTGTATTTGATCTTAGGCCTTAGGACAAC
TGTAAAAGGCAGGTATTGTAGAAGACAATGTTTCTGAGAGACTGAAATGACAAATTAGAAAAAAAGTTAAAGACTTCT
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CAAGACTTGTGATTTTTTCCCCTAACTTGCCAATAAGTATTATTACCATAATAAATATGCTGACGTTTCAAAGTTTAAG
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CCTGCCTGTGGTTTAGATTTGAGATAGGGACCCCTACTTTCTTTCCCCTAAGAGCAGATCTGTGTCATTGGCTATAACT
GCTTTCTGGTCAGCCACATGACACGTGGACTTAACAGATGGTTTCTAATAAGATTGAAAGCATATCTTGACTCCACTTA
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CTGGCTGCTAAAGCCTAAAATAAAACAAAACAGAACAAACTCATCAACAATAACAGCAAAATAAAGCAGGTTGGAAATG
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GCATATTTTTATTAGTGGCATTACTTTTCCAACATTACATTTTATATTGAAGTTCCAGAACAACAAAAAAACACTAAAG
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ACAGCAACATTATTCTTAATAGCCAAAAAGTGGAAACAATCCAAATAGCCATCAGCTGATGGATAAACAAATGTGGTAT
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TCCCCTCCCACCCTTCTCCTCTCCCCTTCTCTCTCTTCCCTTCTTCTTCTTTCCCCCTTTTCCTCTTCCTTCTTCCCTC
CTSTCTTTCCCTTTCCACTCTTTTCTCCTTCCCCACTCATAAATAGATATTATAATGAATTAATTTAGAATTATAGTTA
AGCATACATTTGAAGTAATTGTTCCAATTTCATAATTTTGAAGTATTTTCTGAGAATAAACTGGGCAAATGCAGAATTG
GGACAAATCCTATGTGCAATAATTGCTAATAGGAAGTGTTCTGAAGTATGAATTCTCTCCTCCTTTCTTGTTTGACTTG
TCACTGAATCTCCAGTCCTACAGAGTACTATGTCCTGCTTATTGTTTATTTATACCACACCCCACTTCTACGTATAAAC
ATCACTTTCACTACGGTGGATTCAAATGATCTCTTAGGAATTTAGTTACATTACAGTCTCACATAAAATTACTGCCCTT
AAAAACATTTGTTTGCTGGGCAGGGAGTGGCGAAACCCCATCTCTACTAAAAATACAAAAATTAGCCAGGCGTGGTGGC
GGGCGCCTGTAGTCCCAGCTACTCTGGAGGCTAAGGCATAATTGCTTTAACCTGGGAGGTGCAGCTTGCAGTGAGCAGA
GATTGTGCCACTGCACTCCAGCCTTGGCAACAGAGTGAAACTCTGTCTAAAAAAAAAAAAAAAAATTTTTTTTTTTGCT
AACATTATTTGAAGAATAGTCAGTTCAGTATGCATCTATGTAGACCTAACCAATAGTTGTATTTTACAAGTTTCAGTTT
TGAAATGTTGGATGATATCTTTCAGTTTAAAAAATTAGTATTTCTATAAAGTGTCTTTTTTTGGATGGAAATGTTTCTG
GAATGTGACACTTAAATTTTAATTACTATTATTAAATATCAATGGATTTGTTTTGCATAACCAAACAGTTGGATAAGTT
CAGTTTATGTGCTGTGCAATACTAAGATATTTACTTGGCATGGAGAGAATCACTGGCTTACTAAATAAAAGAATTCAGC
ATTTTGTTTGTCAATCCTATGTTAATTGCATTTATATTTCTGACAGTTTCCTTGATGGAATTAAAAAAAAAAAACATGC
AATAAGATCTGAATTGAGTGTTGAAATGAGTGTTTCCTGAGCTCCAATTAGTGAAAGTATTGAGATTTGAAGAATGGTT
GAGGAGACAAGGTTTTATAATTGCCCTTCTGGGAAAAAGAATGAGTAAACAATAAAGTCTTGAGATCTCTCAAACAAAT
ATACAGTCATAAGGAAAGTTTAAAAGCCACAGTGAAATGCACACCTCTTAATTATGTTAACATTGATATCTATTTTAAA
TTGATATCAATATTAGCTGTGAAAGTTTCGTATATTTTGCAGGGACAAATTCTCTTAGTGTACTCCAAATGCTTATTGT
TACACATCCTGAGCACACAACGCAAACATATTGGGCAAGCAAAGAATCTAGGCTGATATGTGTGAATGCTTATGTGGCA
TTCTATCAAAGGAGATAGATGTACATAAGGGGAATTATGGAGAAGTGAAAATTTGTCTAAGGTTCATTTTTTCAGTAGC

Fig. 9.203

TTAATTTTAATAGTAAACTCTTTTAAGGAATGAATGGCCACAGGCAGAGACTAATGGTGTACTTTCAGTGTTCTCAGTG
AGTGCTTCACAGATTAGGTTTCCAAGAGAAGAAGATTGCCTCTGAGGAAGAAGAGATGGGGTAGCAAGAGGCATATATG
AGACCGTTCTTGGGACCAACACCTATGGAGGGGAGGGAAGAAGGCAGAATTATGGGACCAGATAGAAGAAGTTGGTCTG
CAATGCAGTCTTGAGGAAGGCCTCAGCAGAGCCAATAGACAGTTCCGAAGCTGGCATGCCCTTGAGAGTTGTCCTAAAT
TCGGGTGAGAGGGTTAGGCCTTTATATCCTTGGTCACTTGATAGTAGATGCTGGAACAAAATGGTGCTCTTTAGCTAAG
GCAATTTACAGAGGGCTGACAGCTGAGAGCACTTGTAGAATCTAGGAAAATGAGTCTTTCATTCTTGAAGGGGAATCTT
CACATCATCCACTACAAATGGTGCTATATTTTGGAACCAGCAGACACTGAGAAATGCCAGGTGGATAGAATCCTTCCTT
CTTTTATTCTATCTTTTTTTCTTTCTTTCTGTCTCCTAATCTAGTGCTTCTCCAAAAATACTTTTAAGAATTAGAATTA
GGCCATTAGTTATTATAAGGAAGGAAGGGAAATAATCATTTTCATAAAACTCAGCAATTCTTTTAATGTCAAGATATGG
ATTATTATTACACTCAACAATTATAATTATTAATATTTTCCACGGAAAAGTTTCATATATTGAATGACCCAAGTACTCC
ATGTGACCTTCCCTGTCTATGTAAGCCTAGCATTCTGTCAGCCAAATAAAATTTTGGAAGGAAGGTCAGATAAAATTAT
TTTTTCACTCGGTGTTAAAGAAAAGAAAAAATAAAGAACATTTATTGAGCATGCACTAAATATGACATAAAAGATCTTT
GTTTTCTGTATTAGAGGTTGAGAAAGAATGAAACAGTCTATTGATTTGAAAAGCTTTGCTCTCATTTAGCAATTATTAT
TATTATTATTATTATTATTATTATTATTATTATTATTATTGTTGAGACAGAGTCTCACTCTGTTGCCCAGGCTGGAGTG
CAGTGGCGCGATCTCGGCTCACTGCAAGCTCCGCCTCCTGGGTTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGCT
GGGACTACAGGCTCCTGCCACCACGCCAGGCTAATTTTTTTGTATTTTTAGTAGAGATGGGGTTTCACTATGTTGGCCA
GGATGGTCTCGATCTCCTGACCTCGTGATCCGCCCACCTCGGCCTCCCAAAGTGCTGAGATTACAGGCGTGAGCCACCG
CGCCCGGCCAACAATTATTTTTATAAAATAAAAGTTTATTAATGAATTTATACAAATAGCACTTTATAAAAACTACAAC
ACATTCATTTGGGCTGGGCTGTTGCCTGGTTAGTCACATTTTTTCTTCTTTATTTAGCTATTGCACAGCTTCTGAGGCA
ACCACAAAAACATCAAATTATGGAGAAGTGAGTGCATAGATATATGAAATCAACATTTCAAATTGGTAATAGAATGACC
TTACTTATTAAGTAGTGATCTTTTATCAAGCTGCTACAATAAAATCGACCATAACATTAAACATGGTAGATGTTACTAA
CCAGAAATCTTAGGTATTTAAAGTTATGTTTACTTATTTTTTTTAATAAGACTTGGAAGTGTCACTTAAATCACACTTA
AGAATGGATATTGGCTAAAGGCTGCTGAGTCTTTTAAGATTCCTGTGAATTTTTTTCAGATTGTTCCTCAGTCAATTCA
GGATACTTGTCATTGCTGGCTATACAGCAGAGTGCAGAGTTAGCCCTTGCAGACACACAAAGATAACTCAAGGCACTGA
TTTCTGCATCTTCAGCCTCCTCATTTCATTAACTATTAAAATTAATTCCCTGTAGAGATAATTTGCATCAATCAACAGA
ATAGAAGAATTAGAAGAGCTTCTGAGGCTTTTCTATGACTAAAAGAGCAATTCTTTTATTGACTACCATAAACATTAGA
TTTACTAAAAGGAAAAGGTGTTTTAAATTGAACCACCCCTCTAATTTATTCATCTTAGTTCTGAAAACATGTAGGTAAG
AGTTAATCATGTTACTGAATCTAATTTAAAAAGTGAGAGGGAAAGTACTGAATATTTTTCCTCTTTGAAATTACATGTT
GTTTGCAATATTAGCCTGCCTGTATTTTTCATGTAAACCTTTTGTACATTGAAAACAAATTCAAAATAAAGAACGTTTG
TTTTCAGGCTCAGACCTTAAGAACTGATGGTCTTTTCTTTTACTTCTACACAAAAGTCTAAGCAGTTCTGAAGAAACAC
TACAGTGACATTGGGTCATTGCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGGTTCACAAACTATCAACATTTTAACAAT
CTAATAGTTGATTGTTGTTTCCCAAATTGGTGATTTTGAATGATTATTTTATGTAGAATGGAACTGTGTCTTTTTCTTC
ATTCATGCAACAAACATTTCCTGATGGATACCAAGCAACGGTGACAGGTAAGCATGCCATCCTAGATCAGTGTTATATA
ACTCCCAAGCTTCAGTGAAGGCCTCATTTTTGTTATTACAAACTGCCTCTCTGGGACCTCATGAAGGTACTATTCCTGT
TTCGGGAATAGGTCTATCCATCCTTGTCTTTTTGTTTCCTGTCTTGATTCTACAATCTCCCCTTTGGCCATTACCATCT
CAAAATCCTGCTTCCCAAGGTAATCCGTCTAGCTTTTCTAATCTTCTGGCTTCCCATTACTCATTTCAATTCCTTCTTC
TGGCTCCCTGTTGCTTTCCTAACCAATTTCAATTACTTATCCTTATCTTGAAGGCCATTCACCACTCTGCCCTGCTGAC
GTGTTTTTCTTATCACCCAAGATTCCTCCCCCGGCTCACACTTCTGCATGCAAGCACGTTCCCAAAGTATGAAAATGCT
TTGGATTTATATCATGCTGTTGCCTTGAAGAGTTTTATTCTCTTCCTCATATCTTCTCAGAGAAGAAAGTAATTTGGCT
GTGGTTCAAAATTCACCAAGGCAGTAAAATCTTGTGTTTTGTACACAACTTCCTTTCTAATGACCTCTCCCTTTCTTCA
CCTCACATTGGGCATTCACTCATAACTATTTAAGGGCCTTCTCTTAGGCGGCTGCCCTGTTTTCAGGTTGTGCCCCTATG
TGGTCACAAGTGGCTATTCTTAATAAATCATAGAATCGTAGAATTTAAGTACTGACAGGGATTTCCTATATATAAGAAT
CCAACTTCCTACTCTGCAGAAATCCATCTCAGAACATTCTCAATGCTTAAAATTGCCTTTTCGGGAGAGAACATCAACT
CGTAAGACAAGCTCTTTCCTTGTTGCCTAGGACTCATTTTTAGAAAAATATTCTTTGTAATGAATTGTTTCCCTGCCAC
TTCCTCCCTTTGGTATGAGGCATGTTGCCAGAAAGATACAAAATAATTCTAATAATCTTTCTTAGCCTTGATAATGCAA
GAGAATACAGCAATAATTTCCTCCATTAAACCTTATTTTTTTTTTTTTTGAGGTTAGATGCCTAAATTACTTCAAGGA
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AAGAAGCTTGCTGTCAGTGTTAGTCCAAACACAACCTATCAGTTAGTGTGTTTAGTCATTAATATTTAAGAGTGTTTTC
ATAACCTTTAAATTAATAATTAGTCATCTTTATTCTTTAATGACTACAGAAGCTCACATTCATAGTATTTTGGTAACTA
AGGTATCCATAGGCTCAAAAACTCTTCAAAATTATTGTGTAATGAAAATGTTAACCATATTTAAGAGAGTGACTTGGAA
AAAGGCCTTGTTTTTCAATCTCATATTTTGAAGAACTATTGAGATGTCACTGAATAGTATTTTTAGAATTTTTGAATTG
CTCACACATGAGCACTTGGGGAATTGGTCAGTGAATATATCTCCTGAGCACTTTGTTCCTTGAAATTATCAAATCCTTC
TTGGAATTTCTTTTTCTCTCTCTCGTGATGTGTGGGTGGGACTGGGACATTACCAACACAATTAGAACTTCATTTCTTT
TTCTTCTTAGTGAAATTTATTTCTAAAAGGTTTGTGTGTTTCACTCTATTAGCAGTTCTGGAATCATCCAAGAGTCTA
AGTAGATGTAGCAGAGCTCTTATGGAAACTCTGGATATATACATAATCACACAGAGAATTTGTATTTAATTTTAGAGTT
ACATGTACCACTGGAATCACATTCATATTTCTATTACAGTGTAGTGATTCTGGGTTAAGAATCACTGATTTAGTTCTAC
CTCATTTTACATATACCTTTTCCTGCAAAGATATATAAAAATAAAATCATATGAATAAGTTATGTGTTTAATAGTTCCA
TTCAGTCATCTCATAAGACAAAATTACTTTCTAAGTTAATTTTAATTCAGATCTTTATAGAATATTGAGGTTTTAAATG
TGAACACATATATATAATTTTATGATACAACCTTTTCTTCTGAATACTTAAAGTGTTTTCACAGTTGGAAGTATCAAAA
ACTTTGTTCTCTGTAAACCTTCAGCTTCCAWCCTTCTTCAGTCTTATCTGCAGTTATCTCCTGCACATGTAAATGATGT
GGTAGAAGATACGGTTTAAGATGAATTTTAGTTATTTAAAGTGTGTCATAACCTGAACATTTTACAGATATATTTAAAC

Fig. 9.204

AGGTATAGGTATATTTAAAATCACTATTTTAATTAAAAAAAAAAAAACTTTGAAAAATCCCTAATTTCAAAAATATATT
TAAAATGTACATATATGAATAATATATAGAGAAAGATAGGAAATATTACCATGAATTATACAGACCTCAGTTTATCTAA
ATTTACAGTTTTAAAATAATAATCTTATCCTTATTATCTGAAGATGTCATTGATGATATGTTTCATTTTTATATTTGGC
TTTAGTTTACCAATATTAACATATAAATTATTAAACAATTGTACACCAGCTTTGTGGTCTCTCCTTTGTCATGTGTGAT
TTGTGTAATTTGATGAACTTGATGAAAGCTTCCATTTCAACTTGAAGGCTGTGAATATGCCAGATTATGTGCATTTTGT
AGTAAGGATTATGGAGCTGAACAAGTATGACAGACTTGTTAAATATGTTGTCTACAAATTTTTTTTGTTTTTGTTTGA
GATAGAGTCTCTCTCTGTCACCCAGGCTGGAGTGCAGTGGCGTGATCTCGGCTCACTGCAACCTCCACCTCCCGGGTTC
AAGCGATTCTCCTGCCTCAGCCTCTCGAGTAGCTGGGACTACAGGCTCGTGCCACCATGATCAGCTAATTTTTTGTAGT
TTTAGTAGAGACAGGGTTTCACCATGTTAGCCAGGATGGTCTCGATCTCCTGACCTCATGATCCGCCTGCCTTGGCCTC
CCAAAGTGCTGGAATTACAGGTGTGAGCTACCGCACCCGGCCTATTGTCTACAAATTTTATCACTTTTGGTAAGAAATG
CACAAAGCCTATCATGATGTCATTGCTAGTTTATATGTTTGTGAATTTTAAGCCAAACAAGCGTTCAAAACGTTTGCCA
CAAATCGAGGACCTAAAACCCAGTTTTATATATAAAGATATTTAAAAACATATTTCTGGAGAACTATGCATATACTACC
AACACTTACAAGGCAAATTAAATTAAAAATGTTGTATAAGGAATATAATATTTTAAATTTTTAGTGTAATCAAGAAAAA
GATACATTGTTTTATCAATTGATTAATTTATTGGTCATAGGATTTGGCCTATTTATATTTCTGAGTATCCAACAGAATC
AGTCCCTTAAAATGCTGAATATCACAATTTGCAGTTCGGCTAATACATTTATATCCATTTTATTACTTAGTTGTAATAT
AAAGGAAGTTACCTCTTCATATCCCAGGGAAACTATGGTAGTTGACAAGGAGTGGGTCCAGGCTTTATACCAACTGATG
TCTTATACAACTCGAGGAGTCCCTTTTAAGAGAAATGGATACATCATTGGAATATGTATTGAATGTGGAGATTGAATAT
TTATTTAGGATGTAAAACTAAATCACACCAGATTATAAAATTAATAAAGCTGACAAATTCTACAAGGATAACAAAATTT
ATAAAATTAACTTCATTTTCAGAAAATTAATTGCTTGATACATTTCTATGATTTTTTTGGCTCTGTAGTTTTGGTTGCT
TATTCTCTGATTGCCTCTTCATTTTACATGATTCTATTATGTTTTCTATGTTGAGAATAACAAGATAATGCAGTCTTTT
CTCTAGTATAATTGATTGTAATCTGTCATTTTATTACCGATAGTTTAGAAAAGTTACATCAAGTTTCTCAATTTTTGGG
GGTGATTTCATATACATTCTTAGGACTGTGACCAAACTTGGGAAATATCTCTATCAAATGTCTTTCATTTGTGAACTGT
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AATCAGGTGTGTTCGTGGAAGCTACACCCAGACAGCCAGCAAGAACCTAAGGGTACAGGGAAGAGACTGAGAACCACAA
GAATATAATCACACCAAACTGAAACTAAATGAATCTTTAACTCAGTTTCTAATTAGCCAGATCCCAAAATGGCCCACAG
TCACCCCAGTGCTAACTAACCCAAGGGAAAAGTGTGATATAGGCAAAATCAGTACGTAGACATTGATCTTAAACTTCTG
CAGTTAAAATGTCTCACTCATGCAAAATTCTAAAAGCAAAGGAGCATGCCATCCCACCCCTCGAGCCTTTTCCAGTGCC
TTAGGAAGGAGCTTGTGCAAGTGAGGGGCCCTGAAGCTTCACCCTTCCTAGCCTCACGGTAAATCCACCTCTGTGGTAG
ACAGAAACATTTCTAGACCACAGGAAATCTGTTTGCCTAAGGAAACACAGAAGCTGTCCTTACAGTTAAACAGAAATAG
TTCTATTTTTTTCCTAGAGTTCAGCACCATTTCTCAAGGGGTATTTCTTAGAAGTTCATTTTATGAAGTCTCCTCCACA
AGTTCTTTTTGATAGCCAATAATTCAAATGTCATGCTACTTCTTTAAATCACTCCAGTCATTGAATAGCATAATCTTTT
CAGGGGGCAAACAGCTGGGCTCCAGTAGGCTTTAAATGTTCATTTGTTTTCCAATTTTTTGACTTGCATAGGAAGAAGT
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ATTCACTGAACAGAATGTGCTATTTGTAACCTGGATTATCCTTTAGGTTTTTCGGCATAGTCCTCGAGAAGCTGAGAAT
CTGTCATTTTATTGATTAAAATACACGTACAGATACACACGTTTACATTAGAAATAAAAATGTTGTAAGCTCAAATAGG
CAGGGTATTTCACCTGAAAGCCTGAAATAAATGTGATGAGAACCTATGAACTAAGTTCCAGTGTAAACAAGTGGGTTAA
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GAGTCAGGTACCTCTGATATAACCATTCCTAAAAGACAACAATGGATTCAGAATGTGAGACTGAGAGAAATCCTAGAAG
TCTGACCTTCAGATCAGTTTAACTGTAGATCAATAATCCATTACTCAGACCAACACAGTACCAAAAAATCTCTTCAGCT
GGCTGCCAAGGTACTATTTTATCTTAAATAAGCTGGTTGAGAGCAGTCAATATAGATACATTTTTCCCACTGACAATTT
GCTGATTCAGAGAACATGCAACATCCAGCCACGAAATAGATAAAGCTCAGGCCTGCCCTGTAGAATATGGTCACCTGGC
TTTCCTGTTCTCCTACAAATGTCCTACTGGAAGAATAGCCCTTAATCCCTTAATGTTCATCTAAACCAAGGCTTGTTCT
AAATTCTCTAGACTCTATCTCATGCATTATTACATCTCTCTTGGCATACTTCTCTTCTTGAAGTGCATAACATTTATAT
ACCTTCTACAAATGTTGGTATTATTGATATTGAGGGAGGGGGCAGACCCAGGTCTATGGCCTTATGTATTATTAGTGAA
TTACAATTTCTTAGAGTAATAGGCCAATGATTAAAGTCACATGTTAGGAAAACTTTAATCCACTAGGGAAAACTTCCAA
TATTTTTCAAAGTAATTTACTACATTTGGATGCAAATTATATAGGTGTTTTTGGTGGTATCCATACTTGCTTTCTTGTC
AACCTGAAGAGATGTAAATGTAAATCGATGCTAATTGTACCGTGCTTACACAAAGAGCTAATTTGAGTAATATCCTATC
CCATCAGTTCATTTTCACCATACATTTTTTTCTTTACAAAATTGTTTTTAAAACTCCACTGGAAAAAAATATATAATAA
ACTACATGTAAATTACACAATTTAGTAAATTTTGATATAGGTATACACATCTGTGAGAAAATTACCAAAACTGAGATAG
TACACAAATATATATCACCCCCAAAAGTTTCCTCGTGTCTTTGTCATTCCTTCCTCCAGCTTTTTCCCAGAAATTTCAC
CTTCCTCAGGCTGATCAACACTCAGCTGAAGACTCAAGAGGGGGCCTGTGCAGATGTCCCTGAGTTCCCTCTCTGGGCC
ACTGTCTCCTCTCTTTTCAGCAAATTCTAGTTACCTTGACCTCCCTGAATTCCCAGCTCCATCTCCTCAACTTAGGGAG
ACTTTCAGGTCAGGCAGTGATCCCTCCTCCTTATGCTGGGACCTGGAAGCTCTCCAGCATGTACACTGGGGCAACCATA
GGCGTCATCTCATTGTATTCATTTTCTCTAATCACCATGCTAAGCTAACTGTTGCCTAAGGTCTGAAAACTGTTGTTTC
ATTCATTTTGTCCAGTTTTTCCATTCTTTCATGAGCAAGCATAAACCTGACTCCTTTGGGCAAGAAGCAGAAGTCCCTA
TAGTGACTTTATTTACTTTATTGTTATTGTCAGCATTTGGAAAAAAAAATGTAGAGATTGACTATTTTATACTATTTAA
GTAATTTTTTGTTATATTGATTTTACCTAAACAAGAGTTTATTAGAAGTATTTTGTTATACAGCTTATAACAAATAATT
GTACAAAAATTAGAAAAATCAGATGAACAAATTTTTTATAAGACTTCTCGTGGTTATAGAATGACTCTAACACCTTGTA
GTGTATTTTTTAGGATTTTGTTCTTAGTGCATGTGTTAGTCTGTTTTCATGCTGCTGATAAAGACATACCTGAGACTGG

Fig. 9.205

GAAGAAAAAGAGGTTTAATTGGATTTACAGTTCCACATGGCCGGGGAGGCCTCAGAATCATGGTGGGAGGTGAAAGACA
CTTCTTACATGGTGGCGGCAAGAAAAAATGAGGAAGATGCAAAAGTGGAAACCCCTGATAAAACCATCAGATCTTGTGA
GACTTATTCACCACCACGAGAATAGTATAGGGGAAACTTCCCCCATGATTCAAATTATCTCCCACCGGGTGTCCCCCAC
AACACATGGAAATTATGGGAGTATAATTCAAGATGAGATTTGGGTGGGGACACAGAGTCAAACCGTATCAGTGTATATG
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AAAAGTAGTAAATATTTTTTAGTAAAATTAAATATATATATATAGTAAAAAGTGAAAGCTGTTTTACTTCCATTCCCAGAG
AAAACTTTACTTAAATTTTATATAGTTTTTTCCAGAGTTCTTCCTACACCTGAAAAACACAGTGGATTATTTTTGTGTA
CAAAAGAAAAGAAATCATTCTATATGTATCTCCTTTACTTCCACTCTTTTTCTTTCCACTTAATTCATACAGATAAACT
TTACCATTTAAATGGCCTCTGGTGATTCCTTTATAAGAATGAACCATTAGATAGTTAACCAGTTTACTAATGACAGACA
TTTATATTGCTCCCAAGTTGTTGCCATTGTTCATTTATTTATTTCTTTAGTATTAATTCCTAGATAAGTTGCTACATCA
AAAATAATGTACATTTAATATTGCAATAGTTACAAGGAAATCTGTACTTTTTTCAGTAATATATTAGTGTCTACTTTCA
AAAAGCTTTAAATTCTGAGCATCATATTGTCTTCTAAATCTTTGACAAAAATTAATGTAAATGAATATGCTATTTTAAT
TGTCATTTATTTATTTGATTATTAGTAAGATTTAGATTTAGATTTCAGTCTTTTTATTAGCCATTTCAGAGGGATGAGC
ATTCTCTGCCTATGGACTTTGCCTGGTTTTGTATTGATGTGTTCATTGTTTTCTTATTTCCTCATTTGTAACATCATTT
TAAAGTGCTTTTATTTCTGGACAATGTTTTTACATTTTTTAAGACTCCTATTGTGATTTTTATTAAAACAAAGTTAGAT
YTATAGAAAAGCTGGAAAGAATTTGAAGTTTTAACGATATTCGCTCTCCCTTTCCAGAATATGTGGCAAAGGAGGGAAA
AGAAGGGATTCTGAAGGAACACACGGGAAGTCGGCAGTGTGGGAGTGATGGATATGTTCATTCCCTTGCTTGTGGTGAT
GGTCTCACTGGTGTATACATTTGCAGTAATTGTCAAGTTGTACACTTTAAAATATGTGCAGTTTATTTTATCTCAGTTA
CATCTCAATGAAACTTTTTTTTTAAGTGGCACCAAACATACATTAAATAGCTTTCAGCCAAAAGTAAAAACTGAGTTTG
GTCAGAATATTTTTGTGCTATTTTGGTTAGATTTCTTCTGTCACAGTTATAATGGCTTTCTAAAATAAAYTAGGAAGCC
GGAGAAAGTCACTTTAACCTTCAAGAGTAGGGAAACTGAACCCATAAAAAAAGTGCTTCCAGGTCAGACTCAGCCTAAA
AAACCTGAAAAATAAATGTGACTTCTGAGTAGCAGTATATGGGAAAAATTTTCTATAAATCTCTGAGAATGAAGTTGAC
TGGAGACTACACAAGAGACAAAGAGATATAGAATTGCCTTAAATCTGAACCATGGAGTTACAGAATGATAATGGCATTA
TGATAAATTTTTAGAGAACACTCTTGATAAACAGGCACACTCAAAAATAGCTTTTTGTTTGTTGTTGTTGTTGTTTGTT
TTCTGTGCAAGAGGTGACAATTGAATGAGGTTCCAAAAAGTAGTGTGGGCTTGCATTGCACACATATTATCAGGCAGGA
TTTGTGCAGTAGAGAAAGGTGACTGAAGAATGTAGTGGAAGGACATGCTACTGGAAGAAGCTGCCAAGTGACATACACA
GGGCTGTGAGTCAGCCAGGGTTGAGGCTCTGTCCAGTGGGACAGCAGGCTCTGTCTCCACAGTGGGGACTGCCTGAGAG
CTGGGTGCTCTGGTTCAGCCATTGTAGCACAAAGGCACTTGTATAAATTTCCGTGAAATGGCTTGAAACCTACTTTGCC
ATAAGAATGAGATAAATTTTTAATTCAAAACTTAAAATATCTTGATTAGAATAAGGAGGAGGAAGAGAAAGAACAGGCA
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GCATTGATGGATTGATTGTTACTTTTCAATAACTTTTTCCATATTTGCTCTAGTTTTAAATTTGCAAATTTTAATTCAG
TATTGTTTATAATAAGACAAAAGCTCTTCTTTAAGGTTGGGGCATTAATGTTAAAAAAAAAAAAAGAACTGTTACATCA
AATGTACATCAAATGCAGTGACTGGACAACAACCAAAGAAACTTCCTGTGTAATCCCCATCCCATCACACACACACACA
CACACACACACACACACACACACACACACACTATAGACACTATATTTAAAATTGGCAGGGGTGATATTATGAACTCCTG
TAAAACCAAATTGATTTGTGTTTGTCAGGAATGTGTGGGTCTGTGTCCTGGAATGCTATATATTTCCACTGTGCACTGC
CCATTGACCATTTCTACTAGGATGCCTTGAAGGCACCTCAGACTCAACAAGTTCAATTTGAAATTCATTATGTACTCCC
CAGTTGTTCACGCTAGGAGCCTTCAGGCCACCCGTGACTTTTCTCTCTCCTTGAGTCTCTCCTTAGCTTCCCATGGATC
AGTCTCTGTACCATGTTGATTCTACCTTCTGAGTATCCTTTCTGCTCTCCCTCATCTGCACTTCTGTTACCACTGCCTG
AGTTTGGTTATGGGCTTCTTAGTCTTTTAGTCTTTTCTCTCCCCCAACCCAGCCATCGCCACCAGCAAGAACTATCTT
TCTAAAGCACCAATTATCTTTCCAAAACAGAAGATTTTCTCTTCTTTGTAGGAATTTAACTTTAGGGCATAGTCAGATA
AATTAGCCAAAATATATGTGAAGAAGCTGTTCATCACAATATTGTTTATTATAGTAAAAAAAGGAAAAAAACCTTAATA
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ATGATATTATAAAAAATTATTAAATAATGTGCATAGAAAAATTTGTGGAAAATGTTTTATGCTATAAAAATATTTCTAG
GTAATGGAATTTAGTAAGAATTTTTCTCTTCCTACTTCCCACCAAACAAAAGCAAAATAAAACTAAAATAGAACAAAAA
TTCTGCTATGTAGCCCTTTACAAAAGATAGTGCTTCTGGCAAGAAACTGTGACTGACCAAAATCCTGCAATTCAGTACC
TGTGAAATGCCATATAACAAATTTACTCATATCCTAAAAGTTATGAGAACTGGGGGCTTCAGGACATCTCATACCTGCC
TCATTTTTTCAAGAAAATTTGTTGTAGAATCTTTTATATAAAACACTATACACTGTCCTTAATCCACTATGTCCTATTC
CCTCTATTTACAAATGTGCTTTGTCCTTACATTTCTTTAAAAAAAAAACAACAAAAAACTGTGTTCACACGTATCTTTG
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AAGCTCCGTATCTCTCTCATTTAAGGTCCCTGATAGGAGTTACTTGTTCTCAAACATGTGTGTTGGCTCTTTACTGTCT
TTTAAGTAGCATTTATGATGAATTCCCTTTTTTTAATGGTGGTATTACAGTATCTGATGTTAGGCATAGAACTGCTCAG
GCAGCAAGTCACCTTTTCTTTTTCCCCTTTTTTGATAGACTTGAGAGACCAAGGCAGCACACACACACTCCTCCAACTA
GCTTTGCAATTTGCATACATTTCGATTCTGGTGGKCTATTCATCATTTTTATAGAAATGCTTTTATGAAATTCGATCTC
ATGGAGTGAGTTAGGAGTTTCTTTGTTTTTTGCTTTATGATAACCCATTGCCTCAGTAAATATCTTAATTATTCCCAGA
AAAAAATAAACCCAACTGATTAGACCTAATCCCTTCTCAAATCACTTTACTTTCTTTGTCATTTCCTATCCATCCTCTC
TCTACACTCAGATGTCTTTGTTTTATTATGAAATATATTTGGCATGAGTAACAACATTAAGTAATATGAATCATTTTAT
TTGGTTAAATGTCTACACTCAAAGATTAGTGGAGAATTTGGAAAATATAACGAAATAATACTGGAACTTTTGATATTTC
CCTAGCTACTTGCCATATTCAAAAGATGTGTCTTTGAAGTGAAGAGCAGAATAGTACCTTATTATAGTCCATATTAAAT

Fig. 9.206

CATATTTATGGCTTTCAACAGAAGTATTGAAAACCAGATTCAGTTGCTGCACCCATCAACTCATCATCTACATTAGGTA
TTTCTCCGAATGTTATCCCTTCCCTTGMCCCCAACCCCCCGACAGGCCCCAGTGTGTGATGTTCCCCTCCCTTTGCCCA
TATGTTCTCATTGTTCAACTCCCACTTATGAGTGAGAACATGCGGTGTTTGGTTTTCGGTTCCTGTGTTAGTTTGCTAA
GAATGATGGTTTCAAGCTTCATCCAAGTCCCTGCAAAGGACATGAACTCATTTTTTTTTTTTTATGTCTGCAAAGTATT
CCATGGTGTATATGTGCCACATTTTCTTCATCCAGTCTATCATTGATGGGTATTTTTGTTGGTTCCAAGTCTTTGCTAT
TGTGAATAGTCCTGCAATAAACATACACGTGCATGTGTCTCTATAGTAGAATGATTTATAATCCTTTGGGATTATATAC
CCAGTAATGGGATTGCTGGGTCAAATGGTATTTCTACTTCTAGATCCTTGAGAAATCGCCACACTGTCTTCCACGATGG
TTGAACCAATTTACACTCCCACCAACAGTGTAAAAGCATTCCTATTTCTCCACATCCTTTCCAGCATCTATTTTTTCCT
GACTTTTTAATGATCGTCATTCTAACTGGTGTGAGATGGTATCTCATTGTAGTTTTGATTTGCATTTCTCTAATGACCA
GTGATGATGAGCTTTTTTCATATGCTTGTTCATATGCATAAATGTCTTCTTTTGAGAATTGTCTGTCCATATCCTTCGT
CTGCTTTTTGATGGGGTTGTTTGTTTCTTGTAAATTTGTTTAAGTTCCTTGTAGATTCTGGATATTAGACCTTTGTCAG
ATGGAGACTGCAAAACTTTTCTCTCATTCTCTAGCCTGTTCACTCTGATGATAGTTTCTTTTGCTGTGCAGAAGCTCTT
TAGTTTAGTTAGATCCCATTTGTCAATTTTGGCTTTCGTTGCCATTGCTTTTGGTGTTTTAGTCATGAACTCTTTGCCC
ATGCTTATGTCCTGAATGGTATTGCCTAGGTTTTCTTCTAGGGTTTTTATGGTTTTAGGTCTTAAGTTTAAGTCTTTAA
TCCATCTTGAGTTAATTTTTGTATAAGGTGTAAGGAAGGGGTCCAGTTTCAGTTTTCTGCATATGGCTAGCCAGTTTTC
CCAACAGCATTTATTAAATAGGGAATCCATTCCCCATTGCTTGTTTTTGTCAGGTTTGTCAAAGATCAGATGGTTGTAG
ATGTGTGGTGTTGTTTCTGAGGCCTCTGTTCTGTTCCATTGGTCTATATACCTGTTTGGTACCAGTAGCATGCTGTTG
TGGTTACTGTAGCCTTATAGTATAGTTTGAAGTCAGGTAGCTTGATGCTTCCAGCTTTGTTTTTGTTTGTTTGTTTGT
TTTTTCTTTTGCTTAGGATTGTCTTGGCAATACGGGCTCTCTTTTGGTTCCATATGAAATTTAAAGTAGTTTTTTCTAA
TTCTGTGAAGAAAGTCAATGGTAGCTTGATGGGAATAGCATTGAATCTATAAATTACTTTGGACAGTGTGGCCATTTTC
ACTATATTGATTCTTCCTATCCATGAGCATGGAATGTTTTTCCATTTGTTTGTGTCTTCTCTTATTTCCTTGGGCAGTG
GTTTGTAGTTCAACTTGAAGAGGTCCTTCACATCCCTTGTAAGTTGTATTCGTAGGTATTTTCTTCTYTTTGTTGCAAT
TGTGAATGGGAGTTTGCTCATGATTTGGCTCTCTGTTTGTCTATTATTTGTGTATAGGAATGATTGTGATTTTTGTACA
TTGAGTTTTTATCCTGAGACTTTGCTGAAGTTGCTTATCAGCTTAAGGAGTTTTTGGGCTGAGACGATGGGGTTTTCTA
AATATACAGTCATGTCATCCGCAAAGAGAGATAATTTAACATCCTCTCTTCCTATTTGAATATATTTTATTTCTTTCTC
TTGCCTGATTGCCCTGGCCAGAACTTCCAATACTGTGTTGAACAGGAGTGGTGAAAGAGGGCATCCTTGTCTTGTGCCA
GTTTTCAAAGGGAATACTTCCAGCTTTTGCCCATTCAGTATGTTGTTGGCTGTGGGTTTGTCATAAATAGCTCTTATTA
TTTCAAGACATGTTACATCAATACCTATTGAGTGTTTTTAGCATGAAGGAGTGTTGAATTTTATCGAAGGCCTTTTCTG
CATCTATTGAGTTGATCATGTGGTTTTTGTCATTGGTTTCATTTATGTGATGGGTTATGTTTATTGATTTGCATATGTT
GAACTAGCCTTGCATCCCAGGGATGAAGCCGACTTGATCGTGGTGGATAAGCTTTTTAATGCGTTGCTGGATTTGGTTT
ACCAGTATTTTATTGAGGATTTTCACATCGATGTTCATCAAGGATATTTGGCCTGAGATTTTCTTTTTTTGTTGTGTCT
CTGCCAGCTTTTGGTATCAGGATGATGCTGGCCTCATAAAACGAGTTAGGGAGGAGTCCCTCTTTTTCTATTGATTGGA
ATAGTTTCAGAAGGAACGGTACCAGCTCCTCTTTGTACCTCTGGTAGAATTTGGCTGTGAATTCATCTGGTCCTGGGCT
TTTTTTGGTTGGTAAGTTATTAATTACTGCCTCAATTTCAGAATTTGTTATTGGTCTATTCAGGGATTCCACTTCTTTC
TGGTTTAGTCTTAGGAAGGTGTATGTGTCCAGGAATTTATCCATTTCTTCTAGATTTTCTAGTTTATTTGTGTAGAGGT
GTTTATAGTATTCTCTGGTGGTAGTTTGTATTTCTGTGGGATCAATGATGATATCCCCTTTATCATTTTTTATTTATKG
TGTCTATTTGATTCTTCTCTCTTTTCTTCTTCATTGATCTGGCTAGTGGTCTGTTTTGTTAATCGTTTCAAAAAACCAG
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TGCCTTCTGCTGGCTTTTGAATGTGTTTGCCCTTGCTTCTCTAGTTCTTTTAATTGTGATGTTAGGGTGTCAATTTTAG
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CTGATATTGACAGTGGGGTGTTAAAGTCTCCCACTAGTATTGTGTGGAAGTCTAAGTCTCTTTGTAGGTCTCTAGGAAC
TTGCATTATGAATCTGGGTGCTCTTGTATTGGGTGCATATATATTTCAGGTAGTTAGCTCTTCTTGTTGCATTGAACCC
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CACATGAGATGAGTCTACTRAATACAGCACATTGATGGGTCTTGACTCTGTCTAGTTTGCCAGCCTGTGCCATTTAATT
GGGGCATTTAGCTCATTTACATTTAAGGTTAATATTGTTATGTATGAATTTGATCCTGTCATTATGATGCTAGCTGTTT
ATTTTGCCCATTAGTTGATGTAGTTTCTTCATAGTGTCAGCGGTCTTTACAATTTAATATGTTTTTGCAGTGGCTGGTA
TCAGTTTTTCCTTTCCATATTTAGTGCTTCCTCCAGGAGCTCTTGTAAGGCAGGCCTGGTGGGGACGAAATCCCTCAGG
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TTGATGAATCTCACGATTATGTGTCTTGGGGTTGCTCTTCTCAAGGAGTATCTTTGTGAGGTTCTCTGTATTTTCTGAA
TTTGAATGTTGGCCTGTCTTGCTAGGTTGGGGAAGTTCTCCTGGAAAATATCCTGAAAAGTGTTTTCCAACTTGGTTTC
ATTCTTCCCATCTCTTTCAGGTACACTAATCACATGTAGGTTTGGCTTTTTACATAGTCCCATATTTCTTGGAAGCTTT
TTTCATTCCTTTTCATTCTTTTTTTATCTAATCTTGTCTTCATGCTTTATTTCATTAAGTTGATCTTCAATCTCTGATA
TCCTTTCTTCCACTTGATCAGTTTGGCTATTGATACTGTGGTAAGCTTCACGATGTTCTCGTGCTGTGTTTTTTCAACT

Fig. 9.207

CCATCAGGTTATTTATGTTCTTCTCTAAACTGGTTATTCTAGTTAGCTATTCCACTAACCTTTTATCAATGTTCTTAGC
TTCCTTGCATTAGGTTAGAACATACTTTTTTAGCTTGGAGGAGTTTGTTATTACCCACCTTCTGAAGCCTATTTCTGTG
AATTGATCTAACTCATTTTCTGTCCAGTTTTGTTCCCTTGCTGGCGAGGAGTTGTGATCCTTCGGAGAAGAAGAGGCAT
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TTGGTGACCTTTAGATGGAGTTTTTGTGTGGTCATCTTTTTTGTTGATGTTGATGCTATTGCTTTTTGTTTGTTAGTTT
TCCTTCTAGCAGTCAGACCCCTCTTCTGCAGGTTTGCTGGAGGTCCACTCCACACCCTGTTTGCCTGGGTATCACTAGC
AGAGCCTGCAGAACAGCAAAAATTGCTCCCTGCTCCTTCCTCTGGAAGCTTCGTCCAAGAGGGGCACCCAACAGATGCC
AGCCAGAACTCTCCTGTATGAAGTGTCTGTCAACCCCTGCTGGGAGTATCTCCCYATCGGGAGGCACAGGGGTCAGGGG
CCAACTTGAGGAGGGAGTCTGTTCCTTAGCAGAGCTTAAGGGCTGTGCTGGGAAATCTGCTGTTCTCTTCAGAGCTGGC
AGGCAGGAACATTTAAGTCTGCTGAAGCTGTGCCCAAAGCCACCCCTCCCCCCAGGTGCTCTGTCCCAGGGAGATGGGA
GTTTTATCTGTAAGCCCCTGACTGGGGCTGCTACCTTTCTTTCAGAGATACCCTGCTCAGACAGGAAGAATCTAGAGAG
GCAGTCTGGCTACAGCAACTTTGTGGAGCTGCGGTGGGCTCTGCCCAGTTTGAACTTCCTGGCAGCTTTGTTTACACTG
TGAGGGAAAAACCACCTACTTAAGCCTCAGTAATGGCGGACACCCCTCCCCACACCAAGCTAGAGCATCCCAGGTCGAC
TTCAGGCTGCTATACTGGCAGCAAGAATTTCAAGCCAGTGTATCTTAGCTTGCTGGGCTCTGTCAGTGTGGGATTCACT
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AGCCCTTGTGGTATAGGCACCCAAGAGAATCTCCTGATCTGTGGCTAGTGAAGACCGTGGGAAAAGCATAGTATCTGGG
CTGGGTAGCTTCGTTCCTCACGGCACAGTCCCTCATGACTTCCCTTGGGTAGAGGAGGGAGTTCCCGAGCCCCTTGTGC
TTCCCAGGTGGGGAGACGCCCCACCCTGCTTCTGCTTGCCCTCTGTGGGCTGCACCCACTGTCTAACCAGGTCCAGTGA
GATGAGCTGGGTACCTCAGTTGGAAATGCTGAAATCACCTGCCTTCTGTGTTGATCTCACTGGGAGCTGCAGGCCGGAG
CTGTTTCTATTTGGCCATCTTTATTCTCTTACAATTGAAAAATAATGATCTTAAAATTTTTGTCTCCACAAACAAAAGC
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CAAGCAGATGGCATTGCTTGATTAGAGTCAGGCCATATTTAGAACATTTCTATAAAGCCATTCTCATTTGGGCAAACAT
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ATAGACTAAAATTATATATAGACGTATGTGCGTATGTGTGCATATGCATAAAAGTGTATGTATCTCCATACTTCAAAGG
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CCAGGGATCATGCTAACTCAGACTTCTGTCTTGAGTCTGCCACATAAGAGCAATATTTCCTCAGGCAAATTATTTTCAT
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TCTCTTCGTCTTCTCTCTGTACATGTCTCTGTGTCCACATTTCCCTTCATGTCTCTGTGTCCAAATTTCTCTTTGTCTT
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CCATGCTTGACCACTGATGTAGTTTGGCTGTGTCCCCACCAAAATATCCTGAATTGTAGTTCCCATAATCCGCACGTGT
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ACCTCTTTCCATTATAAATCACCCAGTGTCAGGTATGTCTTTATTAGTGGGATGAGAACGGACTAATACAACTACCTTT
TCTAAGAACAGTCTTACCCTTTCCTAGCACACACAGTCCCTTGCCCTATATAATATGCCAAAGTAAATCATAGAATCAT
TTATTTTCTTATTCTTTTTCTATCCCCCACACTAGTCTGAAGTCCATGGTGCCAGGGCCCTACTTGTCTTGGAGGTTGT
TCTATTCTGGGCTTGGAGAACAGTGCCTGGTACAAAATAGATCCTTAACCTCTGGCTTGAGGTTAGGGCTCAATAAGTA
ATAGGTGGTATAAGTATCTAAAAAAGAATCTCATTCTCTATCCAAATTGGTATTCACTAGCCATATGTGAAAGAAACTA
AATTTTCAATTTTATTTTAATAAATCTAAATTTAAATATCCATTAGTGGCTATTATATTGGACAGCACAGATATAGAAC
ATTTCTGCTACTGCAGGAAGTTCTATGGGACATTTCTAGACATAGAAGCATAGATGAGGATATAATAGTGATAATTCAG
TTCAGACCCGGTGCTGCCTGCCAAATTCCACAACACTGCCCTGCATTGCTGCCCTCTCATGACACCACACAGCTCCCAG

Fig. 9.208

TTGATTTGTTCTTCTTTATGGTACCAGGTGTATTGGGTGTATTGCAAGCATTTTCTTCTTCCATTATTAAGTTAAAAAT
ACCCCTTGAAGTTTTGAAAAGCTGTAAAGGGGTTGTCTTGAGAGTCCCATTAACATTTATAGTGAATTCTGTGGCAGCA
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AAAATATGGGTGCAGGTACAAGGAGTCAGCAGGTGTCACGTGTGGCTCATTTCTTCCCTCAACCCTGGAAAGTATATA
GATTCTCACCATCCTTGTTCAGCCTCTGCCTTAGGGATAAGCAGTGCTGGGGTGATTTTATGCTCAGRAAGTAACCAAA
GGCTAGCAAACATCTCTCATTGTTGGCAGTAAAAACCATTGCTATGAATAACAATCTATATTTTATAAAACTATTTGG
CTTCACATAAAAATCTGATGCTTCAAGGAACATACTCCAATGTGCCTTGAAGTATAGCACATACTCCAATGTGTTACTG
AATCCTGAACCACACCCCTAAAGGAGGCATTCATTGATATCACTGGCTTAACAAAAGGCTTTGGGGTGGGGTGAAGGGA
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TTTTTAAATAACCTCTATTACTATCATTTTAATCTTTGAACAGTGACAAAATATCCCACCTGCTTTGTGACTTTTCTGA
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TCTAAGTTGGTACCTAACTAATTCTTATTGCCTGAATGTGGTTGTAGAGTAGACCCTTCATTAGGAAGTGAATAGGGGA
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CACTGTTATAAAAAAGCTTTCCATTTTTGTAAACTGCAAACTTGCAGTTAGCTTAACTAAAATTACATAATAGAATTTC
CAAATTAAGAAATTAAGTCACTCATTTGTTCTGTAAAGCAGTCACCCTTGAATAAAGAAATSCATGGTTCAACATATTT
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AATTCTCTTGTTGACTTTCATTTAAATGTTTGATGTATAGAAACCTCATTTCATTAAATACTTCAGAGGCCAACTGTTA
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TTTTGTTTTGTTTTTTTGAGACGGAGTCTCACTCTTTCACCCAGGCTGGAGTACAGTGGCACAATCTGGGCTCACTGCA
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TAGTAACCTTAATTGCATCTACAAAAATTCCTTTTTCCATGTAAAGTAATATAACCGTGGAGTAACACCAGGGCTGAGG
GTAATAGGAGTCATCTTAGAATTGTGTATTAGCCAAGATGTGGAATTCCTATCAATAAATTTAAGCAGTGTTTCCATTA
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CTTAAAGGAATGCTAAGAGTTCTACCATTTGAGAAATAAAGAACTACCAGGCAAAATGAAGAAATAACCATGTAATTGA
AAAACTGCCAGAAATAATTCTTAATTAGATGTAGACCAAATGTCTCAATAGTTGGATAACAAGGCAGAGGCCACATAAT
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AGCTTAAAGGGGTAAAGCAAAGGGAGGAGACTGAAAAAAAAATGACAAATTCGGGAGAAGATCTTTTAACTTTCTGTTC
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ACTGAAGATGTCAGAGACAGAGAAGGCCCCAAAGGATGGAACAGGGGATGGAATTAGGAGAAACGTCCTGAAGGATAGA
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GAACAGAAAATGAGTAGTGGTTTCAAATGAGGGAGAAAAAGCAATTACATGTAAGAAGGCTTCTATCCTCTCAACACAA
CGGGGCTGCTTTATATATATATTTTCTCTTCTGTAAAGTGATAAAAAAATAGTAAGGCCAAATAATATTTATGATAGTTAAC
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AATCACTTGTTAAAAATAGCATTGCAGAGAAACATTGAACCCTCCTTAAATGTAAATAGCACGATTCATYGAACATCTA
GTCAAGATGACTAATCTTTTTTTTCTAGTAACGCTCAACAGTCTAGAAGGTACAGAAGGCGGTGGGTATCAAGGTTTATA
AAAGGTCAGGAATTGGAACTCTGGGGACCTGGTTGTTCTCATGAGGGCACATACCAAGATCAGGGTGAGCTAGGAAGTT
TAAGTGATAGGAAGATAATAGATTTATTTAGAGAGGGGAAATTGAGACAGTTTCAAGCCTCGGAGATGGAACAGAACAA
CAGAGCTCCAAGCACTGGGATGCAGGGCTGGAGGTGACCAAGTCCACGACTTTGTCTTTCTAAAGTGAAGTGGAGGTGA

Fig. 9.209

GTCTGAAGAAATTATCACTGTGATTAAGGTTGTTATTGAGGGCAACAGGGCAAGCTAGCTTAGGAAGAAAAAGTTTGGC
CTAGGTRTAAGATGTAGTTGTCTAATATTGAACAGCACAGATTTTAGAACATTAGCATCACCACAGAAAATTCGATTGA
ACAGCACTGTACTAGAGGTACAGGAAAGTGAGAGGGTAGGGTCTTACAGAAAATGTTGGAGCAGAAGAAACTATGCCAA
ATGAGGATGTGAGCAAGGATATTCTGTATTTTTGACAATTTTGAAGCATTATTTATTATTTTAACGTTTCTGAAATTTG
GATGAGTCATGCAATTGATGTGCTCATTTAATAAGGTTAGTGTTTATTTTTGTCCTGAAAAACCATTAAGCAATTAATA
ATGCATCTCACAATCAGTGTCATCATAATATCAATGAAATATGGTAAGAGCAAGGCCAAAGGAAGGGTTTTCTTACTGG
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AAGAACTAGCCCCAAGATATTAGTCAGCACTTTGGAGGGGTGATGAATTTGCCATGGTTTAAAGTACTTCTTTGAGTTT
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GTCATTCTAAAATAGTCTCCCAGGTGCTGATGCGCTTTGGCAACTACAGTAGGTCTTCCTTAAGATTGGGCATGGAAGA
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TTGTTTTACTTTTTGATGCTGTAATAACTCTGGCATGACTTTTCACAGCAAATTAGAATTAAGACCTTTTAAATTTGTC
CCAAATGGTTATTGATACCTGCAATAATACTTTTCCCCCTGGAATTATATTTTCCTCTTAAAATATATGTGTGTATGCA
TACATTCGTATATATAGTGTGTGGGTATGTGTTTGTGTGCATATGTGTGTGCATATATATATATAAAGAAAATAGTGTA
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TCAGATGACATAAAAGATATGAAAATATAAACTATAACGTATAAATATACTGAACTGTAAAGTCATACAAATTTAAGTC
ATTAATGTTACTGATTGGAGTTCATTTCTCAGATTTCACATAGTTGTTGGGCACAGAAAATTTGGAAACTTTGGCTTTC
ATTCTTGCACAGACTAATTTAGCATCATATTCTTGTTCTTTGCTGATTTATCAGGTAAGGAAAAAGTCAAGTAAAATGA
TTTGGATGCCTCACTGCCAGGGAATGCTTGATAAATTAAAAGCCTGGCTTCCTAGGGACATTCTGACTACTGTTGTTTA
TAACCAAGATCTTTTGCAACCTTAGACTTCCCAGGAAAAGCCTGGGCTTTGTTGCTGCAGGAAGGAGAACAGGGAGGAA
AATATCTTTCAGATTTAATCAGTGAGAAACTACTAGGAATTAGCCACTATGCTAGGGAATACCCAATCATTATTTTGAT
ACTTTTGTAAGCTGAAGCATCATTTAGGGGCCTAGCAGGTTTGCTTTCTGATCATATTCAAAGCCTTCACCTGGGTGAA
CTCCTGTGAGAACCTATAATTCAGGGATGCTAAAGTCACCATGGTGACAAGAAGAACTCAGCTGGCTTCCTATTCAATG
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GTATTGCTAATATACAACCTCTGGAATAGACCTGATCAGTTACCCAGTCTCTGGAAGAGGGTGGTAATTGAAAAACTAA
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TCCACTGATCTTGACTTCAGTTTTACCTTGGCAATTCACCTCCATGGCCACACTCTGAACTTTGTCATCAGCCAGAACT
GCTCCAACCAACCTCAAAATCTTAAACTCAAATATCCCACACTCTAAGCATAGTTTTCTTTCTTTCTAGCTCCTCTTAT
TACGTTAAAGACCTAATAGTCTTATTTCTCAACTGCTTTCTTGCTAACCCTTCATTGTTCTCCTCATAAACCCAAACAG
GAGATAACAAGCCAGGATTAATCCACCTGTGTGATCTCCCCATTTTTAACCCTTGTGTTTCCAGAGAAAAACACAACCA
CTTACACTGGTGCCACAGCAAGTTCATACTCTCCAGACCCAATTGGATGGAGCCTCAATACTGCCAAAATCCCATTCAT
TTCTCTAGTCAGCCTTGTGTCCTTTTTTCCCAATAAAAACTCTGTCTCTTGGTCACATGGACATTTCCATCCTATTTCT
GTTTGAGGTAGAAATCTGCTCCTGTACCTTGAGTCCCACCTGCTTCTGCCTTTTCAGTTGACTTGCTCCTTCACCTGCC
ACTTGTCTTGGATCACCAGCTTTAGCCATGGACTAAGTCTTTAACATGGGYATTTAAACATACTTAAAACACTTCCTTC
AAAAAGCAAAGCATAACAGTGCTAAAGCAAATTTTCATGGGTCCTCCTCTGCCTACTGCCTTCCTCCCTCTAACAGCCA
AATAATTTTGCATCTACTCTCAATTTTGCACTTTCCTACACCAAATATACTGACATTTTTAGTGCTAAATCCAGGAAAT
TTTTCTTAGTCTTTGTTTTACTCAGATTCTCTTCAGTATTTGAAGAGTGTAGGCCACTCTCTGTGCATAAAACAGTCT
ATTCCTCCATGGGCTCCTAGCTAACAGCCTGCAGTTTGTCAGTTTTCTTTGGGGTTTCTTGATCCTCTGCCTACCACTG
AAATGGCAGTGTTCTTTYGTCAGCACTTTCTGCTGTTACCCCATATTCCAGAGGTATTTAGCCATGGCTATGCATCAGA
ATCACCTGCAAAGCCTTTTAAAATGCAGCCATCCGCTTGCTATGCTCGATCATCTGAATCAGAATTACTAGGGATTGGG
GCCCAGGCACCTAAGTTATTCAGAAATTCCACAGATGATTGTGATATGCTGGTGGTCTTCTTCACATCCATGCCTTCTC
AGGCATTCCCTTTATCAGTCTTTCATCTGGATATCCTAGACCCTAGGCTTATATTTTAGATATGTCTGCACAAGATGTC
CAAACTCACTGATGTGTCCAAGAGAGCCTCCTTGCCTCCATTCCCTTCCCATCTCATCCAATCTGCTCTACCACCTCCC
CCTTTTCTCCTCCCCCATATTTCAGTCTGAATGAGTGACATCAGATTTTATTAAATTGTACAAGCCAGAAACTTGATAA
TCATTTTGAATTGTTTTATTTATCCCTCATGTCCAATCAATTGTCAAGTTATATCAGTTTCACCTCTAGTATTCTCCAA
AGTTTTTTATATACATGGGTATTACTTTAGGTTAAGCTAAGTCAGTCTGTGTTGCTATAACAAAATACCTAAAACTGGG
TAATTTATAATGAACAGAAACTCATTTCTTACAGTCTGGAAGCTGGAAAGTCCAATATCAACGTGCCAGCATCTTGCGA
GGGCTTTCTTGTTGTGACATCATATGGCGGAAAGTGAGAGGGCAGGAGAGAGCAAGAAGGGACTGAACTTGCCCTTATA
AGGGCACCAATGCCTCCCATGAGGGTGGAGCCCTCATGACCTAATTACCTCTTAAAGGTCCCACCTCTTAATACTGTTA
CAATGACTATTAAATTTCAATATGAGTTTTGGAAGGGGAGAAACATTCAAACCATAGCAGCCACCATCATCTGTCTTCT
GAAATATTACCACCACCTCCTGACTGTATCCTCTGTGTTTGGCTTTGCTTACTCCCACTAATCTGTTTTTCACACAATG

Fig. 9.210

CTCAGAACATTTTTTTCTAGAGGATAAATATGATAATATATATTTCCTGCTTAAGACTTTTCAGTGACTATCTGTTGCT
TTCAGAATAGAGGCCAAGCTGTAACATGGCATATATGGCCCATCAGAACCCGACGCCTGTTCTGTTCTTTTGTCAGGTC
CTCTCTTTCATTCTGCACACAGTTTTCATCACAATTCTCTGGCGTTCATGATTCTCTCTTGTCTCTGAGCCTTTGTTTC
TTTGCTGTTTTTGCCTAGAACACCCTCTTCCTCTTGGCTCAGGTCTTACATCTTCCATTCCTGTCAAGGTAACTCCTCC
TCATGTTCCAGCTCATATCTGATATATCATCTTTTAAAAGGATGTCTGCCTAAACCTGTAGAATGGGCTTAAGAGGGCT
TCCTGTTTATTCTCATACTGTGTACAATGAAAATCTACTCATTGATTTACTTCTCTCTCCCACCCAACTTTATGTTCCT
TTAACATAGAAACTTTTAGGCATCGAAGAATTCTTTTTTTTACATGACACATAAACTCTCAATGATTGTTGAAGGAATG
AAATGAGGAGTATTCAGAACTGTTAGTAAAAAAAAAAATCRGAAAATAATGATCAAGAGAGGCTTTATAAAGGGAAAGT
CAGTAGTTGAAAAGCTAGAAGTAGAATGAGCTGACTGACTTGAAAAGAGGCCACTACTTAGTGAAAAGCACTTCATTGG
TATGGTAGGAGTTGAAGTCAGAATGCAGAAAATTGAGGAATGAGTGGTGTATGAGTTTTCTGCTGAAACAAAGTACTAG
AAACAGAGTGGTTTAAACAGAAATGTGTTGTCTCACAGTTATGGAGGTGAGAATTCTACGATCGAGGTGTTGGCAGGGC
CATGCTCCCTGTAAAGGAGCTAGGGAAGGAACTGTTCCAGTTCTCTCTTGTAGCTTCTGGTAGTTCCTTTGCTTGTAGC
AGCATCCATCCAGTCTTCACATAGTGTTCCTTCTGTGTACGTGTTTGTCTCTTCACATGGTGTTCTTTTTATAAAGGCG
TGAGGCACACTGGATTAGGGACCTACTCTCTTGCAATATGTCCTCATCTTCACTTAATGAATCATACCTGCAACAATCC
TATTTCCAGTAAGGTCACATTCTCACGTACGAGGAGTTAGGACTTCAACACATGATTTCTGGGGGAGACGCAATAAAGT
GTTGGACTTGGGTTTATTCGTGGTGCTATTATTGTCATACATTCATAGATCAATATTAGCTTTTAATCTCTTATTTTAG
AGTCCACATTGTAGCATAATATTTACTGTGGTTGCCATGGAAGAGAAGTTAGTAAATGACTTTCACTATACAGGGCTAC
CACACTGGTTTCCAAATTGAGCTCTTCAAGGTTGAAGATGGAGGACGATGGAGCTCCTCCACCACAGCACCCTCTCTTT
GCCTAATTTACCCATAAGCAAAGCAAGGTTTGAAATCCACCTATCTAAAATAAGACTTTTAGACATGTTGGAGGATATA
TTTTTAGTCATAATGTTGATAGCAAATAAGAAGAGAAGATACACCCTCAGCAATTGGAGACAAGAAAATCTGATGCATA
ATTTAAAAGAAGAAAACGACAAAAAGTACGAAATCTTATGTGCACTTATTACCTAATACTTTAAAATCTTGGAGATATA
TATATATATATATATATATATATGTAATTATTAGGTCTAAGTAATACACAAAGTTAAACCCTTCACTATCTTAGTTGGA
ATACGTATAGAGGTATAGATATATATAGATATCCTTTCCCACACTTATTTAGCTCTTGAAATGCATAGAATAGGAAAA
AAATCAGAATTATAATCTCCATGGGAGCAACTTTATACCAAAAAACACAGAAGCAATTATATTTGAAACCTGCTAGAGT
ACAAAATTCTAGATTATCTTTAGCAGTTTACTTTTATTTTCATGGATAAAATTTGAAAAGACAAGGGCCAGTGACTCAT
TCTACCATTTGAGAGCATCGCTAGGGAGCATGACATTATCACAGAGACAGATATATGGTGACTTGGAAATTTTTTGTAG
GTAATTCCTATTCTTAAACTTAATATGAGTTGCCAATTTGGAACACTGCTACATTATATTTATCACAGAGTTATAACTT
TTAATGGTTTGAGGGATCATAGATCTGACCACATCAATATTTGGCTCATTTTCAAAATAGAAAGTGCTGAAACACCAAA
ATACTGAGCTGAATTCTTTAAAACTTTAAAGCTGAAAAACCACTCATGTACATAAAGTGAAATAAGAATCAACCTAGTG
TAAATGGCTGCATTTTTGAAATTCCATTGTAAATCTTAATAAAAAATATTGTTTTAAAAAGCCAGCATGTTTGGAAATG
GGTGTAATTTGCATTAAAATCAGATGAGATTATTTCTTGGTTTTACTACTAAGACACATGGACACAGGAAGGGGAACAT
CACACACCAGGGCCTGTTGTGGGGTGGGGGAAGGGGGGAGGGATAGCATTAGGAGATATACCTAGTGTTAAATGACGAG
TTAATGGGTGCAGCACACCAACATGGCACATGTATACATATGTAACTAACCTGCACATTGTGCACATGTACCCTAAAAC
TTAAAGTATAATTGAAAAAAAAAAAGACAGATTGTGGATGCTTATGGAAAATACGTTTACTTTTTCTAGACTCCTAGAA
GGCCATTTTGAGGACTTCTGTAATAATTCACTAAATAGATAGAAAACTGCCTAGACCTATACTTCGCTGTAAGATAGTC
CTCTTTTGGTCTAACCCTCATTTCTATTTAGCTAACTAGCTAGTCAGGAGTGTAAGGTAGGCAGTATAAAGAATTTTAA
ACTTACTAGGGTCACATTCAAAGTAAGCCTAGAGTAAAATCAGGAGATCAGATTACCCCAGCTACTGAGACTGAAATGT
GAACTGTATTGTTGAAGAGCTTTTCTTCCTCACAATTGAAGAAGACATAAAGACTGGTGATATAAGAGCAAATGCAGAC
ACTTTTGGTCACTGTTAGCTTGTTTTGAATGTGCTGACTGTGTCTGTGTCCATCTTGAAAATATTGAGGAGTCAGCAAA
ACATATTTGACTCTTTACCCACTTTTTCTTAAATGTTTCATAGTCATGAGTATTTCGTGGGGGAATTTAATCTATGTGC
CTATGATTCATTTACACTAGTCTCATCAAAATGGCATAGGGAGATATTGAATGGCTAAGAATCCTTAAAGTTTAAGAGG
CCATTTAAGGCTTTTATCTCTGAACCAGAAAGTCATAGTGTACCAGGACTACTCCCAATTCAAACATACCAGGGTTCAA
TTTTGTTTTGTCTAATATATCCCAGGAAACCTTACTGTTTGATTCATGATTTCTAACCTCAAAATGCTGGTCTAACATA
TGTATATATATATTAATGAAGTCCAGGTAAGAAGCGCATGGCTAGAATGGGAATGTTCAACATAAAAATATCCCAGCCA
GGCGTGGTGGCTCATGCCTGTAATCCCAGCAGTTTGGGAGGTCGAGGCCTGCAGATCGCTTGAGCTCAAGAGTTTGAGA
CCAGCCTGAGCAACATGGCAAAACCCTGTCTCTACAAAAAATACAAAAATTAGCTGGGTGTGGTAGTGCGTGCCTGTAG
TCTCAGCTACTCAGGAGGCTGAGGCCTGAGAATTGCTTGAGCCTGAGAGGTGGAGGTTGCAGAACCGAGACTGTGCCAC
TGCACTCAGGTCTAGATGATAGAGAGAGACCCTACCACCAAAAAAAAAAAAAAATGAAAGCCACATTTTGAATAACTAA
ATTTGAATATCAGCACAGTTGCCTGAGGATGTATCAATTTACAGATAAATGCCTTCCTACCAACTGAAGAATAACTAGT
GCTTTAAAACTTTTCATCCATTAAAGGAAAGTCACACTGAATTACTCCGTTGGTGTTGTGCGATATTCTATAGTTTTTA
AAATGCTTTAAAATACATAATCTTGTCTGATTAGGTAAACAGGATTGGTATTCTCTCCATTTCTAAAAGGGGAAAATAC
AATTACATAGAAGTTTGTATATTGTTGCTTTATGTGTAGTAACATAGACTCTTACAGTTCTGAGCTATGATTGTATGCA
ATAATAGAAGCAATGCTGCACATATCTCATATAGCTCTATTTTATTTTTAAATTCACTTTTCTCATACTTGTAAGAAAT
CTTTGACTTTGGTTTTAGTTAAAAGATAAAACAAAATCATAATTTCTATGATAATACAAAGCTTGAATATTATCATTGG
CATAAAATTCAGTTCTAATTTTTCTCCAAAATAAGATGCTTACTCCAATATAATTATCTTCCTTCTTAATTTTACATAT
TTGCATTTTAAAGTGGCCTATTCCTATGGGGCTAATGTCAGAGCAGAGTGTTCTTTGAACTCAATGTGTGCTCCCCAGT
CAGGTCAAGTCCAGTCAGGGCAGTGACTAAGAAATGGGTCAGAACTTACTTAAATTATGCAGTTGCCTGGAAAAAAGTT
CAACTTATATAATATATGGGAATATGTGAATGGAGAATGGCTTCCCCCTTAATGTGTAAACTGTAACTCAAAATATTTT
TTTGAGTTATAGAAAAATTTTTTTGTAAAAAAATTAAGAAAAAAGTTTTTTTAAAAATTGAGCCAAATATTAAGATAA
TCTTCATGGTGAAGCATTACTAAATTAATTTAACGGCAGTCTTAATGTAATGTAATTTTGGTTTACTGATATGTAATCA
GTTAATCTTGAAGATTTCATAAGTTCTGGCATTTGTTCTTTCCTCTTGTTCTCTCTTATAAATTGGTCAATTCTCCAA

Fig. 9.211

AATATGCAAATTAAATTTAATGTTAACCTATGTGTAAGTCAAGGCATGTGAATCCCATGACCAAATAAATATTACAAAG
CAGGTGTCTCTACACTGATGCTGAATACCTACCATTTAGAGAAGACAACTCTCTTCCCCAGGGTCTCAAGGCATCTCAT
TCCCCTGGCTTTCCCCCTTTTCCCTTGAGGACTCTGCATCCTCCTTTGCTGCATCCTCCTCAGCTTTCCAAAGTCTTAG
CATGGACATGTCCCAAGCTTAGTCCTTGCAGTCTTCTGTCCTCCTTCTGCGTATCTCTTACACCTCATCTAATCACAAG
ACTTCAAAGTCTATATGCCATTGTTTGTCAAGTCTCTACCGATCTGGATCTCTCACCTGATACAGACTTTCATATTCAA
CTGCCTTCCTGTCATTTCCACCATGATGTCTCCTCTATACCTGAAACTGAGCATGTCCAAAACCAAAGTATTGCTCTTT
CCCAGCAAACTTGCTCCTCCTGGAGCCTTCCTGATCTCAGACCAAACTTTGTTGTTGTCTTTGACTCTTTTTTTCCTCA
CACTCCCAATTCCAATCCAATCAGCAAATCCAGCCAGCATTCTTTCAAAATATAACCCAGAATTTGCCCATTTCTCACC
ATCACCATGGCAACCAGCTTGGTTCCGGCCACCAACTTTCCCACCTGTGTTGCTGCACCACCTCCTGACCAGTGTCCCT
GCTTCAGCCTGTTTTGCACCCCTCAGCAGAGTGAGGCTGCTCCAGTCTAGGTGGCATTAGGTCACTTCTTTGCTCAGAA
TACTTCAGTAACTTCTGATTTTCCTCAAAATGAAATTGAAGGTCTTTATAATAATCTACTATTTTTTCCTGTGGCCTCT
CAGATTCAGCTCCTACTCCTCCTCCTCTGGTCCAGTCACTCTGGTCTCCTTCCATTCCCACAACTATCCAAGCAAAGTC
CTGCTTCAGGTACTTCATGTTCTCAAGTCCTTCAGCCAGAACTTGCATCAGCCTGATATGCCATTGTTTTCTTTCCTCA
CCTCTTTCCATCCTTTATTTGGATATCTTCAGAGTGAGGCTATCCTTTTATTTTGTTTTTAATAATTATATCTTCACCA
TGCCTGTTCCTGGCATTCCCCATCCCCTCTTCTTTTTAAATTGTTCTCCCTGCAAACTGTTATCATATAATCCTTATAT
AGATTTCACTTTTTCTTTTTGTTTATTTTTCATCTCTCCTACCACGACTCAAGAGCCCTAGTTATTTCATAGTTCACTG
CTATATCCCTGGCCTTTAGAGTTGTTCTTAGCATATGGTGGCAGTCAATAAAAATTTGTTGAATAGATAAATAATTACT
GTCTATCTTCCTCTCCTTAGGTAGAAGCAGGCTATATAAAATATAAATTATTGGATTGTCAGACTTGCCCATATTTATA
TTCAAATACGATAATCCAACTTGGTTGTTGGAATCTGTAAAAAAAAAAATTAGAACATCCATTTTTAAAAGATTGAACA
AGCAGTAATTTTTTTCCAAATCTAAAACAAACAAACAAACAAAAAAAAAAACAGTGTCAATCAAGGAATCAGAATATAT
ATTGAATTAATTGTTTTTAGGTCATTAGTGAACTTGACTGTGCTGTTGCTCTCAAAGCACTAAAAATAGCTGATATCAA
ACCAAAGGTCCTTCATGATCCTTGAAACTTCCTTGCAGTTCTAAAGAAAAACTCAAGCTTATAGGAAGAAGTTTTAATG
AGACATTGTGCTGTTCAGGAGAGACAAAATCATAGTTTCTGACCTCAGGGGCATTGATAAAATAAGAGAGCAGAAGCTC
TAGGGAAATTAGTTTTTAGGAAGTGGAATCCGGTGGCTCATTGCACATTCTAAATAGCATCAGAGTAAGAATGACAGTC
TGGCTGATTGGCTTTAGTGATGTGGATAGATTTGGCTGCTATATTATCAAAACTGGATTGAAATCCCTCAATATCAATG
AAGTTTTACAAAGGTATAAGGACTACTGGGCCACAGTTCATTCTAGGACTTCATTTAAGTGACAAAGTAAGGTGGGCCA
AAGTGAGATTGGGACAATAAGCTAAGTAATCTTAAATTTGTTCTTGTGTCTATCCTGATTTGATCAATCCACAAATATT
AATATTTATGGAACATTTACTGTGTACCAGGCACTGTGCTAGGGAGATTGTGTAACAGTGACCACAGCAGATGTAAACC
CTGCCCTTAAGAAGTTTGTATCCTAGTGTGGAGACGGGCATTCAGACAGATAAATGAATATACAAGTGCAGGTTGTGAT
GAGTGTTACAAGGGGAAATACAAGGGTGCTAGGGGAGAGAACATGAGCCATATGGGTTAAACCAGGGCTATCATCTGAC
TGCTTGTGTCCTCCCAAAATTCTTGTTTTGAAATCCTCACCCCCAATATCATGGTATTAGGAAGTGGGGCTTTGGGAGG
TCATTAAGTCATGAGGGCAGGGTTCTTACAAATGGGATTAGTGCCCTTATGAAAGAAGCCTAGATCCTTTTCCCCTTGA
GCCTTGTGAGCTTGCAGTGAATAGATAGTTGTCCATCAACAAGGAAGTAAACCATCACCAGATATCCAATCTGCTGATG
CCTTCATCTTGGACTTCTTAGCTTCTAGGACTGTCAGCAATAAATTTCTGCTATTTCTAATCTACTCAGGTATTTTGTT
ATAGCAGCCTGAATGGACTAAGACAACCAGGTTGTCATTAAAATCTACCCTGAAGGTTCAGTACGAATCCATGATGTAT
TTGAATAAGATTTGTATGTGAATCCTCTGTAAGGACATCCAGATTTGTGGTCTAGATCCCATTTCTTCCCACTTTCTAA
GAGACCTTGTACCCCTAGCCCCTGTTTCTTTCTGCCAGCATTTTCTGTTTTTCTCCACTGACTCCTTACCTTCTGCCAT
TATCAAGTTTTACCTATTTGAAATATAAATATCACATTTAATTATTCTCCATAGCCTTACAGACTTCATGTCTTCACC
ACTCAAAACCTCATGTAGTCTCCTTTTCCCCCTCGTTTACTTATTGTTTCATTGAGGTGTATTTCAATGGGTTTGAGGC
ATGATCCCATCCAAAGGACTAATGTGCATATACTCAAAATGTTAATTCAGCTGAACTGCTCACATCTTTGCTTCATTGC
CCATGTCTTTTTGCACTGAATTGTAAGCCACTAAGCTTTGAATCAATGAACATTTTAAAATGTTATTTGTATAGTGTCT
AAAAACATGTGGCAGTTGAGAATAGATTAATCTGTTCTAGACCAAAATAAGATCCTGGTGAAGAGGATTTTAAATTCTT
GAGTTGAAAGCTGATCAAGGTGGAACCATATAATGCCACATGATACAGTGTGATGTCAGATAGATTATTGTAACAAACA
CATAATTAATTAGTAATGAAGTAATAGGGTTTTAGATGTTTAATCTTCAAGCTGGTAGATATAAATTAGGTCACATTAA
AATCAGTTCTCCAGTCTCAATAGCTCTATGCTCATATTCTCCAGCATAAACCTCAGTAACTCACACAACCTCTTTCACT
TAGCATCTCTGAGACTCTGGGGGGTGCCTTGCAATTGCCCCTGCATGGATCTGCCCAGGATGTCACTTTGTACTGGTCT
CTGCTCTACCAGTGACCTTGACCCATGTTCATTAGTCTCTTGATTGCCTAACGGCAGACACCAACCAGTTTGTTCCAGC
TATGAATGTTCTCTGTTGTATCTAGGGCAGTACCAGAACACTATTCACCTGCAGAGTAGAAAGGAGAGTACATCTCCCT
TCTTGCTCTCTCAGGGGAAGCCAACAGCTGTGCTGCTTCTGGAGCTCTCAAATTCTAGGAATCTAGTGAAAAAAGTTCT
TTCAGTTCTCCACACAACTCTTTGTATTTCCGGGATATGATTAGGAGAGTTCATATGCCAGTCACCACAATCTGCCAAG
AACCACTACACCTTTCAGGAAGCTCAGAGTTTGTGGCTGAGGTTCGGGTTATTCATACCAGATTCCTTTTTTCTGTAGA
GTGAATTCTTAGTCAGAGACCCATTTTCTGTTTTAGTGAGAATGGGCTACAGGAACAACACCAAAAGCTCAGTTGCTTA
GAAGAGTAGAGGCTTATTTCTCACTCAAGCTACATGTTCATGACAGGTTTGTGGTGGAGGGAGAGGGTTCTGCTCTTCA
CTTAGGAACACAGTTAATGGGAGACACCACAGTCGGGAAAGTTCCCAGTCATTGTGGCAGAAGACAGGGCACTTCATAC
ACAGACCTCAGTGGTTTCCCCCAGAAGTGACACGTATTGCTTCTGCTCACATATCTTTTTTCTTTTTTGTCTTGTTTCA
TCAAATCATAGTGATATTCAGATTAACTACATATATATATGTGTGTGTGTGTGTGTGTGTGTACATATACAAATTAGAG
AGATATACGTGTTTCTCATGCTGCTCACATTTTATTTGCCAAAGTAAGGTTACCATGCCTAACTTCAAAGGGGCAAGAA
AGTGCAATCTTGCCATGTGCCTTAAAGAGGGAGAACTGAGAATGGTGACGAATAGCACCAATGATGAGTACACCTTCTT
CCTTGAAGTTTTGCATCTATATCCTTCTACTTCCCATCCAATCCTGCCTTTTATGACATATCTCTCTACATATGATCTT
CAATCATGTAAATTGCTCAGTATTTCTCTATATTAATTAGTGGTTCTGGCTAAGGGTCTCTCACGAGTTGTTGGCTTGG
GCTACAGTCATCTCAAGGCTCAGCTGCTTCCTCAGTGACTCATATAGTTGTTGGAAAGCCTCAACTCCTTGCCATGTGG

Fig. 9.212

GCCTCTCTATAGGGCTAACCACAGTATTATAGCTTGTATCCCCCAGAGTGAGAGATGAGAGAGACAGATAGGCAGACAG
AGACGGAGACAAAAGACAGAGACATCCCAAGACAGAAGTCAAACACAGTCTTTCATAATCTCTTCTTGAAAGTGACATG
TCATCACTGCTGTCTGATAACCAATCCTGGGATAGAGTGGGAGGGGGACTCTACAAAGATGTATGTTAAATGCCAGGAG
GTGGGAGACTTCATGGAAGCTGGCTGCCACTCTCATTCAAGAAGGCTACTTACTCTTATGTAAATCTTGGCTGCCAAAA
ATTGCTGTCTAAATCATAGCTTCTTCCAAGTAGCATACCCAGGACAGGGTAAATGCAATTTAAAACTTCTCTCAAGGGG
GTTACTTCATTTAGACTAGTGTTGGTGTTCTCCTATGCAATTAAATGGTTCTTGTGTCTTATCATTTTCAATGTCCAAT
ATCCAAGGAAATACATGCACTCATCCACAGAATATTTTCTTTATTTTTAAAGTTTAATGCTGTTTTTAAGTCCCTTGT
GTTTAGGTGGTTGTTATACTTGAAATGTTAGCAGACATAATACACAGCAAATAAATTCTTGATGGTTTGCTTATCCTC
TTCTCTAGAAGCATGCGCTGTGTGAGCTAAGTGTGACTTTAAATAGGACATAGGGAGGAATTAGAAATAGAGGCAAAGT
GGCAGAAACCCCACATTAAAATCCATCCTTGTCAGCACTCTCTGATTTCACATACCAGGGTTCTTTTCGGATTAATCAA
AAAATTGTTGAAACGTGTTAAAGGAGAAATGCAATTCTGTAAGGGGAACACAGTTCCTATTTGGAGGGAAGGAATATGT
ATGGCCACTATAATAACAAATTAGGGGAAGGCATGTGTGAATTTTTATGCACTCATCGTCCTATTGAGCACAAGTAGAG
AGGTTTATTTTCTTTTCTTCATTAATTGTTCTTACAGAAATAAACCACACTGTGTAGGAAACTAGGCACTCTTCCCTAC
CTACTCCTGCTATTGAAAGAGCCTTATCTATGGAAATCCTCAAATCAGCTTCTTCTTATTGTACCAGTGATGTCTCTTG
GATTAATTCAGACAAACTGTGCAGTGTAACCAATGCAGACAGTATGTTAGAAGCGCATGGATAGCTTGCTTCCTTTTCA
TTCCTTCTTCCTTCCTTTATTGTTTCCGCATTGTGGTTCCTTGTATCCTACCATCTTGAATCTCTTGTACCTCTAATTA
TAGTATGCTCACTATATGCAAGGTTTCTCCTCCCACCTACCCCCTGCTGCCTCCTCTACTGACATCTCACTTCATTCCC
AAGAAAAACATTGCCCTCCCCTCCAAGCTCACTGTGTTTGCATTTCTCTGCTCTTTTCCGCTCTCCTCCTTGGCATGCT
GGTTTAATCAATTTTACCAAATGACTTTCCTGGCAGCTGTAAAAAGAAAACCCCAGAGCAAGTTAATAGCAATCTAATA
CTGCACTTTCTGTCATTTCTCTAAAACGTACAGAACTATTTGGTCATTGGATTGATTTTTAATGATCTAAATGATCAGA
TGTTTCAACGCTGCACTGCAGCAGCCTGATAATAAATAGGAAAGGGGAGGGGCATGGATGCTGGGCACTCAGTCAGTGC
TAGATGAATAATCCTAAAACAGCAGCCAAGGAGACAAGATAAAATGTCAGCCTTTGCCAAATCATATATTAGCATTTTT
AAACAAAGACACCTCTTTATTTTGATTTTGCATATGGGGAACTAAAACAAAATGTTTTTGATGAGGGTTTAGGAAGTCA
TCAATAGGGTTAGGAATCAAATTACAGCCTAATTCTACGCGTATCTGTTGACATAAGCAGAACGTCAGTAAAGTGCCTC
CCAATATCTCTAAATAGCCTCTTGGCATCTGAAACGTAGGGAAAAATATTGGTTACTTTTTAACCAAAAGGCACTAAAA
CTTCCAAAGGTATATGAAATCAGTAAATTATAAAACATGTCCCCTTCCCCCCCTTCTGTAAGAAAGAAATAGAAAACAA
AAAGAGAGATGAATATGGGAAAATAAACAATGAAATAATATTATGAATTAATTGTAAGACTTGCTAACTGGCTGTGTA
ACTTTGGGTGATTTGCTTAACTATTCTGTGCTTTGTTTTCCTCACTGTAAAGTGGACAAACTAGTAGTACTTTTGTGGA
AGATTAAATGAGGAAAGGCAAGTCAAGTATTGAGCACAGTGCCTGGCATTTACTACTTACGAAGGTTATGTTCTTTATT
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GTCTCCCAGTATGGTGGGCAAAGGTAGGTTTTGGTGTCCAAGCACAGCTCAGCCATTTACTCTCCAGGTCCATGGGCAA
GTAACTTAACCTCTCCAGGTTCCTCAGATTCATCATCTATAAACTGGGGAATATTAGTACATGCTTTATAAGGTTATTG
TATTAAAGGAAATAACTTGTCTAAGTCTCAATGCACAAAGTCTTCCCCAGAAGACAGACTTGAAAAAATATTAACTTTA
TTTCACTCTCCTCCTGCTGCCATTTCCAATGTGCTGTTGCATGTTTCTAAATGGTATGTGGAAGAAAGCTGATTAGTTT
CTTTGCTAATTATTAATTGAATTCCTTTAGTTAATACAATGTATTCTTTTGAGAAGCTCAGCTCAATTTATAGTGCTAG
AAACATACAAATACAGAATTTATACGAGTTGATCTGGGGTTCACATAGATGAAAGGGTGTTTTCCTAGCACATTGCTCT
GAGAATACTGTAACACTCTTACTTCATGTATATTCATGTATATACATATGTATATATCTATATATGTCTGCATCTACAT
ATGAATATATGTATATCAACTGTTCTTATTTAGTATAGTTCTCCCTGAAAAAGAAGGTACTATTTTATTTTTAAATATT
GGATCTTATTTTTAATATTGGATCTATCTGTAATAAAGTAGCCAAGTTAGGCTGACTACCTGTCTAATGAGTTTCCCGT
TTAGATGGATTAGTTCCATTTAGTCTGTTCCATAGCCCAGATCAGACAGTTCACTAACAAATACACTTAAATTCACATC
ACTTTGGTCCAGAGGGTGTAACTAAGGCCCAAACCTGCTTCTGGTGAAAGTGACCCAGAGGTACGCTTTGCTGATAATA
TCAGGAGCATGGTCTTTGTAATTGGAAGACACTGTCTCCCATCTCCCCATTTGTTATTGCAAGAAAATTAGATTCTCAT
TGAAATAACAGGCCCAAGAATTATAGTAACAGGAGTTTGAACCCCTGTTTGAGAATGTTGGTACTCCTGGGATAAATGA
GATCAATTTTAGCCTATAATAACGGTGCTTTCTACACTTTTTAGATGTTAGAGAAAGTCTGGCAGCAAAGCAAAGCTTT
GTATATACCATGGGAGGCAGGGTTGGAGAATAAAAGAAGAAAGAGAGACTTAAGAACAAAATTGTGTTTGATGGGATGT
TTTGATTTTCTTTAAATACTTTAAGTCTCTAGAAATAACAAATTTATTATCTGAAATACAAATAAGAAATACTTATATT
TGGAAAGTTGATAAAACTCAATTATTGTGTAAAATGTTCACAAATTTCCAATGGATAGAAAAAAATAAACTTTTGCATT
GCCAATTATTGAATACTTATTTCACCTTTGGAAATAGCAAGTCAGTTACAAATTTTATAAATCTATATAATTGTCTTT
ATACATAATAAAAATATTCTGATGTTTTGTCAGCCAATATGCAGTTTTAAGCACCTTCAACCCTGTTACATGTTTACGG
GTTTGGAAGTTACTGGGGAGGAGGTAGAAAGGTCTGACCTTCTCCCCAGGAATTTAATATCTGGTCAGAGAGAAAGAAA
CAGACTTTTGTTGTTGTTTTGTTGGTCTTATAAACAGTGCCAAAATGAATGTGTGTATGTGTGTGTATGTTTGTGTGCA
CTTGAGCAATCATTTTTGTAGGATAAACTCTTACAAATGTAATTGTTCTGAAATGGTATGTATGGTTTACATTTTTAAA
AATTTGCTAAATTGTACTCCAAAATGTCTCTCCTAATCCATGTTTCTAACAACTGTGTATGGGTGTACTGTTTCCCACC
CCCTCACAATCTGCATATTTTTAGTCTTTTAAAAAAAATCTTAAACGAATGTGATAGGCAAAATACCTCATTGTAGTTT
GATTTATTTTTGGTTATCAGTGAGATTGAAGATCTTTTCAAATGGCTTTTGACTATTTATAGTTCCCCTTCTGTGATGG
TTATTTGCATCCATGTCCCATTTTTCTTCTGGGTTATTGGTCTTACTCTAATTTATAGACTCTCCTTAAGGCAAATGAT
ACCAAAACCATACCATGGCTGTTTACAGTCGACCCTCCCAGCTTACGTTGCATTAATAATTGCTTCTTAGAAGCTTATG
TTATTCATCCTTCTCCTATTTCTACACTGCTGTTTTCTTGCTTCCCTAATTTAACATTCTCACCATTGCAGTCAGCAGG
TTAAATGGCAAACATCTGAGGAATCAAGGGAAACAACTATGCATTGAGTACTTGCATGTGCTACATGATTTAATCTATA
CCTTCTAATGTAATCCTGAAGAAATCTAGGAGATATGTATCATTGTTTTCCAGACGAAAAAATTAAGATTTGGTTAAGG
TTGGGAAATGAGACTAAGTAAATAAAGTGGTAATAAGAGACTCAGGTCTGTCCGATGATACTAAAAGCCTGTGCTCCTT

Fig. 9.213

CCAGAAAACCACGCTTTCTTCAGAAAAACTGTTTTTACAAGACTGTATTCAAACATATGGCATGTCTTGATATACATCT
AAGTAAATTTTAAAATTATATCTATATTCTTAACTGTCCAATAAAATTGTGTATTTATCATTTACAACATGATGTTTTG
AAGTATATATACATTGTAGACTGACTAAATCTAGAAAATTAACATGCATTAACTCACATGGTTATTTTTGTGATGAAAA
CACTTAATATCCACTCTGTTAACATTTTTCAAGAATACAACATATTGTTATTGACTAGAATCACCATATTGTACAATAG
ATTTCTTGAACTTATTTTTCTTATCTAACTGAAATTTTGTTTCCTTTGATCAATATCACACTTGCACCTCCATTTCCAG
TTGCCCCAGCCCCTGGTAATTACCATTCTAATCTCTAGTTCTATGAGCTCAACTGTTTTAAATTTCCCATATGAATGAG
ATCATGCAGGATTTATCTGGATATATACCTAGTAGTGGGATTGCTGGATCATATGGTAGTTCTATTTTTAATTATTCAA
AGAACCTCCATACTATTTTTTATAATGGCTGTACTAATTTACATTCCCATCAACAGTGTACAAGGGTTCTCTTTTCTCC
ACATTCTTGCCAACACTTAATATCTTTTGACTTTCTGATAATAGCCATTCTAACAAGTATGAAGTGATAGCTCATTGTA
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GATTATTTCCTTTGTTGTGCAGAAGCTTTTTAGCTTGATGCAATCTTGTCTATTTTGGCTTTTGTTGCCTTTGGTTTTG
GAGTCATGTTCAAAAAATCATTGCCTAAATCAGTGTCATATAGCTTTTCCCCTATTCTTACATTTATGTCTTTCATCCA
CTATAGGTTGATTTTTATATATGGTATGAGATAAAGGTTTATATTTATTCTTCTGCATGTGGATATACAGTTTTCCCAG
CACCATTTATTGAAGAGATTGTGTTTCCCCAATGTATGTTCTTGGCACCTTTGTTGAAAATAAGTTCACTGTAGATGTA
GGGGTTTATTTCTGGCTCTCTATTATGTTTCATTGGTCTATATGTCTGTTTTTATGTAAGTACGATGCTGTTTTGGTTA
CTACAACTTTGTTGTGTATTTTGAAGTCAGGTAATGTGATGCCTTTGGCATTGTTCTTTTTGCTCAAGGTTGAGTTGGA
TATTTAATGTCTTTTGTGGTTCCATATGAAATTTAGTATTGTTTTTTTCTGTTTCTGTGAAGAATGGTATTGGAATTTT
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TATGAACACGAACTATCTTTGCATTCATTTGTGTCATCTTTAATGTTATACAGCTTTGTAACTATTATAAATGGGATTT
TAAAAATTTCTTTTTCAGATAGTTCGCTGCTAGTGTATATCAACACTACTGATTTTTGTATGTTGATTTTGTATACTGC
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GCGGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTAGCCAACATGGTGAAACTCCATCTCTACTAAAAATAAAAAAAA
AATAAATAAATAAATAAAAATAGCTGGGTGTGGTGGTGGTGCCTGTAATCCCAGCTCTTTGGGAGGCTAAGGTAGCAGA

Fig. 9.214

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CTACATTGATACATCATTATCTCTAAAACATATAGCTTACATTAGAATTTACTCTTAGTATTGTATATTCTATGGGTTT
GCACAAATTTATATTGATGTATATCTTCCATTTTTGTATCATACGGATAATTCCAACATCTCTGGCATGTCTAGTTCTG
ATGCCTCTTCTGTCTCTTTAAACTGTGTTCTTTGCCTTTAACTATGCATTGTAATTTTTTCTTCATAGCTGGGCATGTA
CTGGATAAAAGGAACTCCTGTAAATAGGCCTTAAGTTATATGGGTGGGCCAGGCATGGTGGCTCATGCCTGGTAATCCC
AGCACTTTGGGAGGTGGAAGCAGGTGGATCACCTGAGGTCAGGAGGTTGAGACCAGCATGGCCAATGTGGTAAAACCTC

Fig. 9.215

ATCTCTACTGAAAACACGAAAATTAGCCAGTCATGGTGACACATACCTCTAATCCTAGCTACTGGGGAGGCTGAGGCAG
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GCTTATATCATTGCCCGCAAATGGAAATGTAGCTAACAAGTATTGAATGTTGAACTGTGTGGTAGTGGAGAAAGATTCA

Fig. 9.216

GAGGTATTCTTACTATCCTATCACCCATAGGTGATGGTTTGACATATGAACAGAGTAGAATAAAATGGACTAAGAAAAT
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CCTTTCTTCCCACATTCCAGAGTCCTTCCTTAAGGATGCATTAATTTACACTCAAGGCGGTTAGATTTTACCAGGACAA
TATTTGCCACCATTTAGGATTATTAGTTGAACTGGTTATTTTAGTATGTTGACTAACTAGTGGAACCTAAATGGATGGA
CCCATACCTGCAGTGCTCTGTGATGTTTCTTTTTTCAAATCCTGGAAGGCCTTTTGTAATTGCTATTTGTTTTTATTGG
TGGGGGGAGATTTTTTTTTTTTTTTTTTTGGGATTCAATACTTGTTGCAATAATTGCCCACGATAGCTGCTCAAACAAGA
GAGTTGGAATTCATCTGTAAAAATCACTACATGTAACGTAGGAGACAAGAAAAAATATTAATGACAGAAGATCTGCGAAC
ATGATGCACGTGAATAATTTTCCCTTTAGAAGGCATTCCTGGATATGGTGAGTAATCAATATTCCCTTCAGTTTGTAAA
ACTCAGAATTATCAAATTCCGTGACAGGTACCAGATGAGGATTTGTCTTGAACTAGAGTATTGGTATCAAGTGAGAATG
AAAAGTAAACTGTGCAAAACCGAATATTGTCTGAGAAAGTAATGGTTATGCAATAAAAATACTTTGTTAATATGAAGCA
TCCCCAAATAAGTCAAGCATGAGGACTTGAGAACATTTAAATTGCTAATATTTCATGGAGGAAGAAAAAAACTTTGAGA
ATGGCAACAATTTAATAAATTTTTTTAAAGATGAGGCTTAGGGTTTGTTTTTGTTGTTTTGCTATTTTTATTTGAAAA
TTCCCTGGGGAAGGGCACACATGAATTTCTGATATATCAATTTGTCTGAATTTCTAAAAGAAGGTTAAGGGAAACTTAG
AATGTTGACTCAATTTTAAAATAATGCTAAAATGTGTTGGTGCCTCACAGTTAAGGATATTTTAGCTATTCAAGAAATA
TTTCTACCAGAATGAACCAGTAGAATTCTAGTAGAATTCTAACATATGAATCAGGAAGTGCTCAGGCTCTCATAGAACT
TGCTTAGTGCCTTGATATTTGGTCATCTATTAAGGTTCAATGCAATGCATTCAGGTCCCTGGACATGTGATATCATGTG
CCATTTCTTGCTGGAGTTTATGACTAAATGTGTGTAGGAACTCATTGCTGAGGGTATTTATAAGAGCAAAAGGTCATTA
TTTTAAAATTGCTTGTTTTTGCCATACCTTTAGGGTCAGCTGGATTCTGACTTTCATAGCAGAAACTTTGTGAATGCAT
AATAAAGGCACATGTTAAGGCTTAGTGTCTGCTAACATGGGTTGTTTTGGAAATGCAGTTTGTCTGATTTTGAAAGTAT
ATCTTTCAGGTAAATGTTCTGGCTGGACTCTGGATGAATAATAGATACCTAAATATAGGTTTCGGAGGGCTTTCCAGCT
GCTTTTATGACAATGTCTCAAATGAAAGCTCCCTGAGAGCTTAAGGTACCACCAAAATCACCTGCTGGTTTGTTACAGA
GTTTTCGGCTTTCAGCTAAAAAAATCCATTGCAGAGAAGGATGGGAGGCATCCTCTCCCACTCTAGGCAGGTGCTTATTT
TCTAACAACACCAGATCCATCCAGAGTCGATGCTGTGGCGTATCTACCTTTTTTGCTGACCAGAGCTACTATCCCCAGT
CTCTAGAATGCTTGGGTGACATGCCTGCAAACCTCGGTGGCCCACTTCCAACTGCATCACCAGAGTTTCCTAGTCAGGG
GGAGCCTTGGTGCCATTGCCTTGCTTGTTCTGTTGGTGAGGGTCAGGCATCAGCAATAAGGTCCTCATTATTCTTACAG
ACAAATTTACATCAATAGTCTTTAATCTTGAGATTAAAAGATCCTGGAAACAGTTCCTGGCACGTAGTAGGCATTTGTC

Fig. 9.217

AATTATTTTTCTTCTATGCCTTAGGCTTTTCTTCAGAGTTCATTTTATACCTCTTAAGATTTGCTTGGGAGGGGAAATT
ACCAGTCTCCTTTCTATCAAGTGTACCTTGCTACAAAGCAACAGTTTTTGTTCTACCTAAGTTCTGCTGTTTAAGCCCA
TTTGTTTATGTTGTAATACATAGGATCCATGTACTCTTTGAATGCCTGCAATTATAAGCACTTTTTATTTTTATTGCAT
TAGCCTCACCTATACTTTTGACTGGAAAGAAATAAGCTATTCAACTCTGAAGTTTTGGAAAGAATGCAAATTTGCTTAT
TCATGCTCCTCTAGATCTGTAATACATATGTTTGAAAGCTGTATGGAGAAGTTGAGAGTCCTGTTGGTTTTCTTTTGTG
CCTGGAGTTAGGTAACCCTTCATCTGCTTCACTGCATGTCGTACCAATCTGTTGTTGTTGTTGTGGCCAAACTAAGCCA
ATGTAGAATGTTAATGCTCTGTATAACTCCTACTCTTCCTGGGCCCCTTGCAGGGATTCATTAATATGATGTTGGACTC
AAAGGAAGAAGGTGGTGGTTTTTTTCCAGGTGACCTAATTAATTTGTGCTTGGTTCTTGACTTTCTCAATGGTTGTTG
TTTTCCTCTTATTTATAGCCTCCCCTTCCAGTACTGCAGTAAGAGATTGTAGGGGTTTGTTGACAGAAAACCCTCTTTC
CCTTTGTCCTACTGTAAGAGCCCCTATAGGGTGAGATTTCAGGCTCGTGAATTATCGTGCTTAGAATAAAGGTCTCGCC
AAATTGCTCTTTTCATCTCCAAAGACTCCCCCTATCCTCATTCTCACATTTAGAGCCTTTTCTTCGTGAAGGGACCGAT
CAGAAGTTGGCAACAGGCCAGTGCTAAGGAATAATAAACATTGTAAAAGACATATGTGCTTTGGTTTCACGAGCCCTAG
CTCATCTCTAGAAAGGCTCTGTACCCTTTGGAGAGGCGGGACTTGGCATGTGCTGGTCCTCTTTCTGTCCTGCTTTTTG
AGAAGCAAGAATGAGAAAAAGCTGAGACACAGGAGGTCTAGGGTAGTCTTCAAATTTTACCAGAAGTAGTAATTGAAAT
AGAAGCCTGTGCACAGAGTTCCTACTTGTACTCTCATCCACCTGCCCTAGGGCTGGTGTGTTGATTATTGAGCAATAGT
ATTACAAATTCACTCTTTATCAGTTATGAGTTAAAGTTAATAAGTGGTCCTATTACTTGGTTTAATAGAACACTACCCC
TTCCGTGCTAAAAGAGTGGTATGAAGAATGTGTGTTTCTTCTTTGAAGCTACATTAGAAATATTAGCTGGAGGATTTTA
TTGCGAAGGCTTCTTTCCATTACACTTTTCAGTCTTTTTACTGCCAAGCCAAACAAAGATAAGGGTTTGCCTCACTGGA
TAGATAAGTACTATATAGCTCTTCTTATTTTTCCTTCTGGCTAGTTGTTAGAATGGAGAGATAGCCTGGCATTCAGGAA
CAAGTATGGCATGGTTGAAAGAAGGGAAATGCAAGTCAGCTTTCTAGGAATTTAAATTTCATGTAGCAGCAGTTAAGAG
GACCTTTAGAAGCATTATGACCTGGAATCACATGCCAGGGTCTAACATGAATGACCTAACACAGTGTGACTAACATGTT
CAGCTTTTTGCCTGACTTAAAAGATATATAACAACTTTTTATAATCTTATTTGTAAAAATACTATAATTTCATGCCAGA
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TCCTTTTAATGATGGATTCACATGGCTAAAAGGACAGTGGAAGATAGAAGCTAAAGGCCCTGGCTAGGAGAGGCTGTGG
AATGCTGCCATGGAGGGCCCCTCTGAGGACACCAGAGGAAGATTTGGGATTAATGATTGTGGAAGGTGATTAATGATTT
GCTTATTTGGTGCTTAGGGTTTAATTTTTAAAGGTAGGACATCTAAATGTTTTAAACTGTCTTTGTGATGCTGAGAGGT
AACTCCAGTGAAGAGGCAAAATGAGGTGACTGTGGCACTTTCACTCAACATGGAGGCATCTTTTTCCTTCTTCTAGGAC
CCTAAATTCTTTCATTAGACTGTCCTTTTCCAGGTATCAATTTCTAAAAGGTTTAGTCTAGAAAGTTATTTGTTTGATT
GTTCCTCTATAGACCAAGCATTCAATTCATAAACTAACTCATACTGTTTTATTCTGTTTTGATCTAAATCCTTTATGGA
ATGAAGCAAGATATAAATCAGTATATTGATAATATATTCATATATGTGTTCATAATTTGCATGTATATGTGTTTAAATC
TACTAATATAATGAATACGTATTCAGAGAAAGTCAGAATGGCCTGCCTTCTAATGAAAAGATAATCCTTCCTATCTAGC
CTCATAGAGTTTCATCTTTTAAGGTTTTCTCCTCTTCATACATTGAAATTACAGAAACTCAATCCAGAAGTGCATTTTC
CAGAGTATGTGTTCTGACCAATACATTATATTTTATTAGAATTTTAGGGGGTGGGAGCAATATTGAGTTTGATGACTAT
GTATACGTTGAAGGAAATGACGTATCAAGTCTCATGTAAGATAATGGAGCTTTGCTCCTTTTAGTTAACTTAAAATTAT
TGCAGTGTCTGCTTGTCTTCCAGTGAAATTGCAGGTAATAGCTGACCTTGCTTCTTTAACATCTCTTCCTCTGGGTTAC
AGAACAACCCAGAAATTCTAAAATATAAATACCAGACTGCCAGCTTAATTCTGAATTCCTGTTGGGGCCAAATACAATT
TACTTGTAAACACTTAGGACCAATAAAGTTTAGATGGAGCTCATAATTATACAAACTCATCTCGTTCACAAATCCCTAG
GGCTCAATGTTAAAGTCAGCCATTGTTTAAGGCAGAAATTCAGGTTTAGATATAGTGTAGCAAAGATTTTCCATTATAT
GAGATATCGATCCTATTAAACATAAAACTTTTCTCTTGGCTTTCTATTTTACTGTCTTTTGTTGCCATCAGCTGTATGC
CCCTTAATTTTTTCTAGTAATACCTTGGAATTTAAAAATGAAATTACAAATGTTTATGTTTTAGTGTTTTTAAAAATAA
TTCGATTAAGTATGCTATGATAGAGGAGCAAAGTTGTTATTAGTAATATCAATGTGCTTACAACTTATGGAAATGAAAA
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AAGGACTGAGTGGCATAAGCCAGGGAGGTCTTAGAAATCTTACAAAAGGAAAAAAATAAGAAATTATTCCTCATCATAT
GAAAATTATTTACTAACAATGTATGATGTTTTAGCTTCTTTTAAATTCTTCACTTTCCACTCCTTTTTGCTTCTTCCTT
TTAGTTGACTATTACTGAGTTACTTACACTAATGTTGAGGTATTTGGGTTCAGAGAAAAATAGGCAAGTAAAGGAAAAT
TGAAAATAGTTTCAAATTCTGAGATGCAAAGAAGAACCCAAAAAAACTAAACAACCAGTTTTTTATTGCCATAGGTCGA
ATGTTCCTTTTTAAAAAAATCCCTCATCCTTTTCTCTCCTCTTTCAATCATATCCCACAAACGTTAATGCTCATTAATA
CTCTGTCTAGCTATAGCATTATCCACATTTTTGCAATAGCTCAAAAATGTCTCCAAGCCATAACTGCTGCAACTGCTTA
TAACTTGATGGACTATTAGGTGACGTTTCCAGTTGTTTGAGAAGTACCAGCCTATAAACATACCCAAGACAATATATTA
CAACTAGGGATTATGTTGTGTAAAATTTATACATATATATCTCTCCATATATGATTTCAAGGATAGATAATCTAGAGTC
TACATAATCAGGCTATTGGCTGGAAACATAAATAAACTAAAAAAAAATAATTTAAAAAAAGCACTCCAGGTTTCTAATT
CAGCTTCTGGAGTGTTAATGTTTTGTGTGACCTTCTGAAAGCTCTTTGAGTTTTTACCACTTTTGAAAACTATTACAGC
AGATATTTACCCACTTCATGTTAAGAAGTAGGCTATTAAAGAAAATCTCATAGCACATTGGTAATAACAATTTATTAGA
GACCAGCCTGAACAACATAGTGAGACCCTGTCTCTCTCTCTATTTTTTTAAAGGTAGCTGGGCATGGTGGTTCATGCCT
GTGGTCCCAGTTACTCAGGGAGGCTAAGGTGGGAGTGTCTCTTGAATTCAGAAGGTTGAGGCTACGATAAGCCATGATC
ATGCCACTGCACTCCAGCCTGGGCAAGACAGAAAGACCCTGTCTCAAAAAAATAAAAGAAGAATTTATTAGAATGTTGA
CAATGACATGCCAAAATCTCTTGTATAACTATCATATACTTCATGGAAGAGATCAACACTGTTGAGCACTCCTCTGCAT
GCCATATGTTTTCACATAAGTTACATCCTTTAATGGCAATATAACTTTCTGAGAATTTCTTATCCAAATCCCTGTTTGC
AGATGAGGAAGGTAATGTTCACAGAGATTAGATAACTTGCTGAAAGTTCATATATCTATTGCTAGGGAAGCTGACCCAC
TCAAAACCAGGCCTGGCCTGATTTTAGAGCCCAATATATTTTTAATCCACCATATTGTTCTTGTGGCAGATGACTTAGC
ACTCTTGTTTATGGATCTTTTTGAAAATTAGATTAGCAGTAGACCAGAGAAAATAAGCAGATTTACCCTGTTATTTAGC

Fig. 9.218

AGCCTGGCTAAGTATGTAGGATGCTTACTGAATGTGAATAGCCTTTCCTTGAGAAACTCTTCCTTTTAATGTTAGAACA
ATGACCTATACTTAGACTGTGTCAGCAGCTCTTTCTGTATTTTCTCAGAATGAGAAATTTAAAAGGAATTTGTGGTGAA
CTCTGTTTCCAAGGTCACTGTGGCCTATAGGATCCTTTCACTAAAAAGTGCCTCTCTGGACGATATATTAGGAAAGGTG
TCACACTTTGAACAGATGAAGTAGAAATGCAAACTACAGTACTTGGTGAATGGACAGAGCCTCTGTTCAAAGCAAAAGT
CACTCTTCCCACTGGGTACACACTTGGTGTGTGGAGCATAGATGAATTCAGCTCTATTCACCATCTCTGCGGGGCATTG
TTGAGCCCTGTTCAAACTGCCTATCTCTGGCCCTGCTTTGATACGGGCTCCAGCTTTACTTTGTGACAGATGAAATGGT
TTTGAGAATGCTTTGCCAAAAATAAAAGATCATCCACATTTTAGGTTTTGCTGCCATAATTATTACTTTCTTCAAAATA
TTCAACTAATTGTATGTCTTTAAACTTCATTTTGTGCTCAAGTAAAGAATATTAGTATTATCTGAAATCAGATCCAATT
GCCAAAGAAGCATTTTAATCATAAAATAGCCCAATTTCTGAGTTACTGAAAAATGTCATGGTTAGTGAATTATATTGGA
ACAGGTGGAACACACTGAGTTATTTATTCATAGGGGATGCCCAGATGAATGTAATAAGAGTCCTGCCTTGGAGATACTC
ATAAACTAGTCTGGAGAACAGCCACAGAAACAAATAATTACAGTATAGTATGGAGCATATTAATATAGATATATACAAG
TTGTTACAGGAGTCAGAAGGAGAAACAACTTAACTGACTTGATCCAAATACCTTAAGTTTCAAAGTGAAAATATATTTG
ATGGATTTGGGAATTAGTAGTTACTGATAATACTTCAGAGAGTGGTTTAAGGGAGTGTCTGGGGGTAAGTTATATTTCA
GGGGTAATAAAGCAGAGAAAAGTTGTGCAAACTACTTCTTTCAAAATTTTGCTTAAGAACGAAGGAGGAGGAGAAGAA
GAGGAGGAAAGAGGAGAAGGAGAGGAGAAAAACACAGTAGCTAGTGAAGAACACCAAGCACTTTTAAGAGTAGGAAGCA
TGTCCCTAAGGAAATATTCTGATACAGAGCTGGGAAACTTGTGGACATGACACCCTCTGGGATAGGGGGAGGAAAAGGA
GGGAGAATGCAGATAATGTGGAGATTAGGTAGGTGGAAGGAGAGCCTGAGGGAGTTTTTGTTTTATGCCCTGTGTTTTC
TCTGGGAAGTATTAAATGGAATTCAAGATCACATCTCAGAAAGAGGACCAGGGAGGAGCAGGTGGAGGAGCTTAGTAAG
ATGATGGAACAGCTACTAGGGGGAATTGGAAAGGTTATTGAAGAGAGAGTACAAGACAGTCAAACAAGTTGGAAAAAGG
TCAGTGATGTTGAATGAATATATCCAGTCAATAAAAGACGTTTTACTCTACTTGAGAAATTATTTACACAAAGTATTAT
GTCAGGGAAATGAGTAGAGATGTGACAGAAATGTTACAATTCTTAATTATTAAATTTGAAACTGTTTTGTGATGAGAAT
GTCTCCTATGGATTGTGTTTCTTGGGATTCCAAAGAATACAGAGTTGATCTTAATTGTTGTTGTTTTATTTGGTAG
TGGTGGAAACTGTTTTATGAACATATTAATTAGATTGCAGTTCCATTTTCATGACCTGATTTTTTGAAAATGTGAGATT
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TTAGAATGTCACAAATCCATATATATGTAACCTGCTTTTACAAAAATTTCTTCAAAACCGCTATGAAGCTTACTTGAAA
GTGTCACCAGTCTCTGAGAAATGTACTGGAAATAAGGAAACATAATATGACTTTAACCAGAACTGATGTAACCCAGTTT
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GGATATTATTAAATAGCCTTATAATTTTCTAGGTCATGAGAATAAACCCTGGAGGATACTGTGACTTTAGCCAATATTA
TGAATTCCTTTCATCTCTTCTAATCATCTCAGCAGAGCTTCCGCTATTATTGTCAGCATTCAGTGCTCACCACTACTTT
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GGGAACTTCATTCTTCCTCTCCCTTGAGTCTCCATATTTTTCTTTTCTAAATATGAAAATGAGAAGGTTGACTTAACTG
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CTCAAGTATTTGGCCTCTCCTATGGAATATCCTTAGCCTGTCTACCTTGGGTATTTTGCTTAATTCCTTCTCCACAAAA
CCTAACTTTAAATGGCAGCCTTTTTCATGGGGAAGACAGCAGCGTTATGCCCGTTAATGCTGATATCCACAGTATTTGA
GAAAACATATTCCATATGCAACCTATACATTTCTCATATCTTCCCAACTCTTCTCTTGATAAAGGTCTCAGGCCCCTTCC
TTTTTCATATATCCTCCATTTAATTTAAGGAAATAACATGATATGAAGTCCTCAATCTTAAGAACCTTGTCATTGGGTT
GCTCACTATGTTTAAAACAAATAATTGGCGTAATGATGGAGAGTCCCTTGATGTTCTAGAGAAGAAAGGAAAGCTAGCA
ATGTGACAGTGGGCAAATTGAGAAAACCGTAGTGGTATTGAGATCAGTGAAAGAGACCTCTTACAAGTCCTAAAGTAAG
GCATTTGAGTCTTAAACCTTTGGGTGTGTTAATTTTAAAAGAAGAAAATATTTGTGGGAAAAGTCCTATTTTTTAGAAA
ATAATCTGTGCCAGATTTGATTTTTGAGAGAGGTTGAATGCTAAGTTGCCTCAGGATGTCATCATTTGAAAGGGTGACC
ACATTCTGTGAGATCTTCACTGCACACAACCTTTTGCTTCAAAGAACTTTCTGAGACCAAGCTAGCCTTTGAGACCAGG
TATTAACATTATAATCTGTTCTATTCATTGCAGTAGCCACCTCGACTACTTTTTTCTACTTTATACCACAATACCCAGC
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AATTATATTGTCAGGGGAAATTTTAATTAAATAACTTTATATTTTTCAAATAATGTTATTGTGCTATGTTTTGAGATAA
GGTAGGGTCGTATGCTATAAAAAATAATACAGATAATAACTATCACATTTAACAGGTTATCCATTCCAAGTATAGACTA
ATTTTTTTATAGACATCATTTTACTTAATCATCCCCCAAGTCTGTGGCAAGGGCTTGTTATCTACTTACTAAGGGTGCA
ACCTTGGGTCACTTATCTAACCTCTCCATGATCTGTAACATAGGGACAGTAAATAGTTCTCATTGCATAGGGTTGCTGT
GAAGATTAAATGAGAAAACCAGTCTAGTGCTTAGAACACCTGTCACTCAGTAAGTATCCAATAAATATTGTTATAGTAC
AGATTAGGCAACTAGCTGTGAATGGTTAACCAGGTTGCCTAGGGTAATCAGTGGCAGGCCACTTCCAACCTAGATCTTA
CCCATTAACTATAGGTTGCTTGGAGGTCTAAACTGCCTCTTCTATATCACATTCTTGTTCAGTAAATACAGGGACAATA
CCTTGGGTTAAGTTTGAATTATGAGGGATAATTTATACCTCCTCATCTCTCAAGCCTCAGCAAGAATCGACTGATGTGC
CCTCCCATGTTGAGTCAGTGCCTACCTTATACAGGATGGATTTTCTGTTTATGACTGTCTTACTCAGGCCCTGCTTCAT
TAGATTCTCTGTTCTTAGCACAGTGCCTGACACATAGTAGGTGCTCAATAAAATGATTTTAGAGTAAACATTACTTTTC
CAGAATTGTGTCCTGGGAATTTACGGCTTTTAATATTAATTTCAGGTTTTTAGGATATAGCCCATGTTTTTGGGGGGAT
AGATACTGTTTCTATAAAAATTGTCATCTTGAGCATAAATAATTCCCACATATCTTGATTTCTGTCACTTGGGAGAGTT
TAACTGGATTTGTAGAAGCAACCATCCTGCCGAACTGGGTGTATCTGTAAAATCTAAATGCTATTGCTACAAATCACCT
TATCTAAGACACCATTTCTTCAAAACTAATAACTAGCTCATTCACTTTCATATAGGAATCTTTCTTTCCTTGAAGATAT
GTATGTTTTATCTTGCTGGTGAGATAAAAGTCTGTAAATTATCTCCACAGCTGGCTCTGATGCTTGATTATGCCCCTTT
CTGCATCTATAACATTGATGTTTCATTTTAATTACTTTTCATCACAGTACATGATGTGGTCTTCAGACATAGACCAGCC

Fig. 9.219

TCTACGTGTGGCTCTTCGTTCTTTTTATACATCTTTCACTGTCAAACTAAGCTCTAAAAATCATCTCCCTAATATCTCT
TCACTTGCCAAGAAAATGTACTAGCTTTGTATTATATGTAATACAGCATAAAGCTCTGCCTCATCTGGCCTCCTCCTTT
CTAGTCTCATTGTAGAAATGATAATTTTTATTAATATTATCAGTGTTAATTAATTTCTCTCATTATTCTAGCATACATA
TCCTATATTTGAGTTTTTAAATATATCAATTCTTTAGTATAGTGGTTATAATCACACTATATATGTATAGAATGAGGTT
TTATTCTCACTTTATTATGAAAGAGTATCAATAACTATTTTATATCATTATATGTAGTTTTGTCAGAGAACATCCTGAA
AAATTAACTTCAATGTTTTAAAAAGCCATAGTTCTCAGTGTGATGGAGATGGTGAGGATTGGAGAATGTCATTAGGGAA
GGCAGTTGTATCATTTATCAGAAATAACTGCAAGACTTTGTTGGGGGAAAGTAATAAGGAGTATGAAAATCTGGAGGT
TGAAGAGTGGGTAGGAAGAGGAAGTGACAGGTATATTTGATAAAGCATTCGAGGGTTTCATACCTCTCTCTCTTAACC
AGTAGTACAATGCAAGGGAAAGATCCCATGCTTTAAAGCTGTATTGAACCAAGTTCAAATTCAACTCTGATGCTGACTG
GTTAACTTTGAGCAAATCACCTTTTATGAGCATCACTTAACTCATTTATAAGAGAAAAATAGAACAGTTCCAATCACCC
AGATTTACTGTAAGGATTCAATGAGATAATACATTATTTAATTTGTCATTTTTAAACCGCAGCTTTTCCCAGGCAGCAT
TTAAGACAACCAACAAAGTTATATGTGCATAACTTATAGGGAGAATGTTGATGAAGGGCAAAGAGAAATAAGGTATGAT
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AAGCGGTTCTCCTAGCTCAGCCTCCCGAGTTGCTGGGACTACGCATGCAAGCTGCCACACCCAGCTAATTTTTGTATTT
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CCCAAAGTGCTAGGATTACAGGAGTGAGTCACTGCAGCTGGCCTAGAAGAGCTATTTTGAACGTGCCCTTGGGATAGGA
AGAAAGTCCCTGAGGATCTGACTATAGGTAGGTGCTCAAGTGCTCTAAGGGTGAAAACTTCTCTGCATAACAGAAGAAG
AATTTAGTGCTAAAGAGCCAATGAGAATGATGGAGATGAGGCAGAGAAATTAGGAGAGAGGACAGGATGAGGAAAATTC
GCCCTGGGAAGGCTGAGAACTGCGGGTATACTCCATAAACAGATCCCTCCCCAGTACTGACAGTGGTTCGGTGGGTGAG
GGGTATTGGGGAGGGTACAGGGAGTTGCTAGGGGTGGGAAGACCACTAATATATGTATGTCTTACTTGAAGCCTCAGGA
GTACCTGAAGTAAGTGATTTTGATGGTGTTGGTGGCATGTGAATCAAAATGAGCTGTGTTGTGTTGGCAAAGCAGGTCA
ATGAGCCCAGCCTTTAGGAAATTATCAGAAATTTAGAGGTGAGTTTTGGGATTCTTACTGGTCATGAAATTAGGAAGTT
CAAATCAATTTTGTTTAGATCTCAAGGGAGGCAGAGGGCCTTCCATCTTTCAAGAGTTAAGCAGACCATGAAGTCCAAG
GGTATGCAAGATGGAATGTAAAGTTCTCACTAAGCTTCCTAGGATCCAGGGTAAATCAGGAAGCTTAAACACAAATCCC
CGTGTCCATTGGATAAACAATTTGATGGATCAGGGAAGCACACCACTTATGATACTAAGATCAGAAAGAAATTTGTCCT
AAGTTGTGCATAAAGATTAATGATATACATATATAAATCATGGTATCTGCTCAACTTAGTGTGTTTGATATATTTTAGT
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TACTATTGTTAGTTTATAATTAAAAGAAAGCGGCCGGGCGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCC
GAGGCGGGTGGATCACGAGGTCAGGAGATCGAGACCATCTTGGCTAATATGGTGAAGCCCCGTCTCTACTAAAAATACA
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ATTAAAGAAAGTATAATAAAATAGATAGTATAAGAAAAGGATAATCCAAATAAAAAATATGTTTCTTATTAAAAAATGG
TATGTCTTGCCAAATTTTGAAGTTAAAAGCACAGCATTCTCACTTCTTTAACCCAACTTATAGCCCATTATAGCACTAG
ATTTTAGAATCCTGAGTCCTATGCCATCTGTAATGGCAACAGTCTTACAGGGTGATACAACCTTTTGTAATTCTTAAGG
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TGAACAAGGTTGCTCCCAATAAGATCTGTCAGCTCACAAGATTGCTTCCCTAGGCTTGAAATGTTTCAAGCACAAATTC
AATTCATAAGGAAAATGAGAATCATGAAAATGATTATGAAATAGCAAGCAGTCTGGAAAGAGGATGTAGACGAATGCCA
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AAACAACTAAATAAAAAAGAAATGCAGTTCTTGAATACAGGATATAAAGGCTCAGTGCACTTTTTCATTTTCTTATTAT
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CAATTCATCATTGCTAAGTGCTCCAAAACTGCTGAGTACAGTATTTAGGAAGTGTCCAGTACATCAGCCTGGCATATAT
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TCTAGCATGAAGAAGAATCTCTTTCATTCTCATGTTACCTTAAAAGATTTTCATACCAATATACATCAGGGAGGAGCAA
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GCTAATTTATTCAAATGTAATCCTGACTAATCCATTATTTTGTTAACATGTCTACTTGATTAATGTGTTTTTCCCCTCT
TCTAATTCTGATCCACAAATTTTATAGCTATTCATTGTATTACTTAATCTAAGTCCACTAAAGATTATCCTTATTCATG
TTTCTCCATTAAAGACAACGATAATATCATTGAGTTAGCTTAGTTCGGATAGAAATTTGGCTAGCATTCATTATTTGAT
TTTCTTGGAGTTTTGCAATTTTTTTTTTTTTGCATATTTGTCAACATTGTATACTCCTGAAAGCATTGTGTTTAAAATA
CCTATTTCTTGATCAGTAGAATTGATATAGCTGACTTACACGGATCAATAACATGATTTTAAGAGCATTTCAAGGAAAT
CTCTCATCTGCATTGTCTTTTTTTCTAACACAGTTTGCACTATTTACAAGTGAAAATTTTATATTACTTTACATATTTT
CCTGTAAAAATTAGAAAACTGTATTCTTTGGCACCCGAATGTGTCCTTGAATTATTAATTTGTTAATTTTGTATGACAT

Fig. 9.220

CCTTATTTATTAGAGAAGCAATAATATTTCTCATGGGAATGCATGTATTAATACTTTCAGAGGTCCAGAAAGTATCAGG
AGATTAAATACTGAGATTAAAGAGTACTCTCTTCCCACTATTATGTTCAGTTCTGATTTTCCAGCTGTGTAGCTAGAAC
AAAGAAAGAATGTGGGTTTTTTTAAAGAATAAGACAAGGCTAGAAGGTATGCCCTTGTGAGGGCGCCACTGACTGTGT
CATCACAGGAGGGCCCTGATACATGAATATTCGGTCTCCAGGAAGCCAAGTATGATATTCACAACCACATAATAATGTG
CTAACCTCATTCACGGTAATCACAGATAATGTAGTATTTGTGTCTGCCATACAGTTTTGAAGGTAAAATATGGAACCTA
TTTTGGAAATTTCACATAACATCTTAAGCTGTATTAATAGAACCAGAATAACCCAAAATAAAGAGGTAATGAATGCACT
TGACCCTGCATCATTCAGACCTCAGCTGGAATATTGTGCTTCCTTTTGGGCTGCAGACAAACAGAAGAGGACTCAGGAG
AGTGACAAGAGAGGAAGCAAGCTCATGCCTTGTCACATATAAAGTGGTTGAAAGACTGCAATTGTTAGAGAAAATGATG
CAGTAATTGAAGGATGGGTACTGGGAAGAGGCTAGTTCTTTGAGGCTGCTAATCTGAAATATAACAAGTGGATGCACCT
GCAGTAAAAGAGATTAAGCCCCAGAATGAGTCTGGATGTTCTAATGGTCAGAACAGGCATTTCATATGACATGGCCTGC
ATTGGTCCAGGTGGCGAAGTAAGGATGGACAAACATGCGTTGTTTGCAATGATAAAAAATCATAAGTAGATGATAACAT
TGATTTGCTGAAATTTTTCTCTTTTTTGTTTGGTGTAAAACTTTATATGTCGTACTTTTTGCCTTGTGGTTTTTTTGTA
TCTTAGGACAAAGGTATTCTTAATCCCTTTCTTTGTCTTCTTGAAAGATGCAACCATGCAGAAAATGCATACCTCCTGT
AAATTGTTTCCTGTCTTTTAGTAAACCTTTGTTTAAATGAGTCATATGTTTAGCAATTTTAACATTTTAACTTGGCTCT
AATTAATGATAATATAGCGTGATTTATGGTCTTCTAAAGAAATGTAGACATAGAAAATGGAGATAGAGGTTAACATGTG
AAGAAGAGTTTGTATTTTGGGTTAGAAAATTAAATATTGGCTTATGTCAGTAAGATTAGGCCTTACTATTTGATTGTAC
GAGTTTACTTTAAATTTCTAGGCTTTCAGGGCTTTGTAAAGATAAATTTTATTTTAAAACAGCTTTAGATTTGCAGAAA
AATGGCAAAGATAGTGCAGGGAGTTTCCATATACCCCTCACCCACTGCCTTTTATTAAAGTCTTATATGAGTATGATAC
TTTTGTTACAATGAATGAACCAGTATTGGTACATTATTATTATTTAAAGTCCCTATTCATTCATATATCCTTAGTTTTA
CCTAAGGTTCTTTTTTTCTATTCCAGGGCCCCACTCAGGATACCACATTGCATTTAGTTCTCGTGTTTCATTTATCTTT
GCTATAGAATTTTCTCAGATTTTCCTTGTTTTTCATTACCTTGGCAGTTTTGAGGAGTACTGATTAGGTATTTTGTAGA
ATGTCTCTCAGTTGGAATTTTCTGATTGATTTTTCATGATTAGACTGTAGTTAGTGTTTTGGGGAGAGAGACCACAGAG
GGTAATGTGCCATTTTTCCATCACACTGTCAACATGACTAAAGATGTTAACCTTGATCACCTGATCGAGGTGGATTTGG
TCAGGTTTTTCCACTATAAATGTATTATTTTTCCTTATTTTTATTATTTTCATACCTACCCTTTGGAAGGAAGTCATGA
TAAACAACCCACACTTAAGAGGGTGTTATACTCCATCTCCTTGAAGGCAGAGAATCTACATAAAATATTTGCAATTCTT
CTCCACAGAAGATTTGCTTATTCTCCCTCATTTAATTATTCAGCATTTATGTATATCAGTATGGACTCATGGATATTTA
TTTTATGCTTAGGTTATAATCCACTACTGTCATACTAATCGTGCTGTGAAATTGTTCCAGCTTTGGCCATTGGGTACTA
TTTCTTGTGTCCCTTTGATACATCCCCACAATTGTGGTGGTTTTGTTTTCTGTTTTTTGTTTGTTTTGTTTTGATGCAC
TTTCATCCTTTCTAGCATTACACAATACTTGAGGCTTATCAACAATATAACTCCTTCCTCATCATAGATTCAGCCATTT
CTCCAAGGAGCACACGTTCCTTTCATTGGAAAATGGTATTAAAAACCAAGATTTGAGCAATAGGTGTGTTCATTGTTTT
TGGGTTGTCATTTCCTTTTGGCCTTCTTGGCTGACAGAGCAAGGACATATATTTGTGTATACCAACCTGTGTATGTACA
CATATCTAACAATCAGGAAGCATAAATAGATAGATGATAGATAGATAAGCATTAGTTCATACTGATATTTTCAAATCTA
ACTCATTACCACATGGGTCATTCTAGCTTCTTCCTCTTGCTTATCTATAATCTTCCACTCCAACAGTGAAAAACTACCA
TCCATCATTTGCTTACTTAATTGTTCAATTCCAGTGGTGCTGTTCCATTTATCCTTACTGAAGTTGAAATACATAAATA
TAAGCTGAATTTTTCTCAAACCCTTAGAAAAATTATTTTTCCCCCAAAATGTTTTTTACCCTGCAAACTCTTAAGATTT
TAAAATGTATTTGTGTCCCAAATGTTTTTCTGTACATAAAAATTGATATAGTCAACTTTATATTGTTTGCAGTTAACTT
GGGACATGGATAATGGAAATTCTCAGATAATTCCACAATTTAAGTTTATCTCTTGCTTTCATTATTTCTAATCAGCATA
CTCTCCATATGACAACTATATCTATGATAAGAAAATTGACTTCTTTACCTATAAATCTCTGTACTTTCTTGACAGACAC
CAAAGAACTACATGTTGACTGTATCTTGCTGGTAACTTAAGGAGAATAGTAACTTGTAGTTTCCACCTTTAGCAACTGG
ACATTGGCCATACTCTGATTTACCAAGAGAGTCCTTGTAATCACAAAGGAAAGCAGCGATTTGGCTTCAGATATTAAAG
CAACTTTTTTTGACGTGGCTAGATGGTTAGGAACACACTGAAGAATAGATTTTCAGTAATGAGCCATACTTTCAATGAA
CGTCCCAAGGAAAACAATTTTAAGATCTTGCATAAAATAGTTCATATGCCTCAAATTTGCATTTAATTCTTACATTAGG
TTGAAAGCTCATGTAGAAAACATGTAATGTAAAAATTGGAGAGCCCAAGAACACAGTCATTTCCCCTTGGGTGCTAACA
AAAATATACTACCCAACAGTGCCTTTGTTTGCAGTCTAATATTTTAGAAGGAAAAAAAGACCCCACAAGCAAACATGTT
TTTTTTTTCTTAGTCCAGAAAGAAGAAATACAGTGTGAACATAATACTTAGGGTAGACAAAATGGCCAAAATAGATTAA
GTTGGCATCCTTTTTAGCTGCAGCTTCCTTAACCTTGTACCACACCCTGACATCATCTTCCTACATGGCCACACCTCAT
CCCCCCATAGCCAAACATTATTTGCATTCATCACTCATTCGTAGATGCCAAATCAGACATGGTTCTTGCCCCTATGGAG
TTTATGATTAACTGGGGAAGACATGCATTAATCAAATTCTCTTTCTCTCTCTCTCATTCTCTCACACACACACACAC
ACACACACACACACACACACACACACACACACATGAAACTGTGACTGGATCAGATGCTACGGGAGAAAGACACACAGGGTT
CAAAAATCTGTGAAGGGTTTTTTTATCTGTTCAGGGAAAATCAGGAATGTCTTCTCTGAGGATGAGTAGTTCAGGCTGT
GATTTGCAGGATCAGTAAGAATTAACCAGGAAAAGAAGGCAAGAGAGAGAACCTTATGTGGTGAATGAACAAATGTTTA
ATATAAAGGCAGCAGAAGAGCCAGGGTGGAGGCAGGCACAGAGGTGGGAGATAAGGCTCTGGTGGCCATGCTAAAGATC
CTTACTTCACCCTGACAGTGATGGATCATCACAACATTTCCAAGATCAAGAATGCACTTCCCATCTGTGTTTCCTCTAA
AGTCAAAATATGGCCCATCTTTCAAAAGGAAAATTCAAATGTTACCCATTCAGTCTTCTAACACTTTCATTTCCTAATC
TAATTAGAAAAGATCATTCTGGCTAAGAGGTGGTATAGTAGTTTAACCCACCCACTCATATGCATGTGTTTGTATTTAT
ATATAAAATTTATTTTCACATTTCTTTTTCCTAGTGGCATTAGCAAAAGCACTCCCAGTTTCATTGAGTCTCTTTTAA
GTTTTGCTTCCCCTCTCCTCCTCTCTTCACTATGCTCTGCTGTCTTGGTGTCTCCCCACTACTCATGTACTCTCCCTCC
ATTTCTCAATTCTCATATGAGGGGAGGTGCCCCAGAGGGTGACGAAGGACAGTGTGGCAGAGGACAGGAGGAAGAAAAC
ATAGGCACAGCTGCACTTCAGCATTCTGAAGCTGTAATCATCCTGAGCATCTGTCCAGGGACTTCCTTGCCCAGTTGCT
TTGCCATCTGTACTTGAAGCCAAGGAGCATCAGGTGCTTTGCCTTTCCTCACCAGGCTTACGCCATAGCCTTTTCACCC
CACTACCCACACCTCCCAGTGATGCTGCAACTATTTCTCCTCTGGGCTCCATGCAGTAACTTTCTGGGTTTTTTTGGTT

Fig. 9.221

GTTGTTTTAGAGCATTTTTGTAGACAGGGTTTTACTCAGTCATCCAGACTGGAGTACAGTGGTGCAGTTATGGCTCACT
GTAGCCTTAACCTCCTGAGCTCAAGGCATCCTCCCACTTCAGCCTCTCAAGTAGGTGGGACTACAGGTGCAAACCAACA
TGCCTGGCTCATTTTTTATTTTTTTGTAAATATAGGGTTTTCCATGTTGCCCAAGTTGGTTTTGATCTCCCGGGCTCA
AGCGATCCTCCTGGTTCAGCCTCCCAAAATGTTGGGATTATAGGCATTATCCACTGTGCCTGGCCCAGTAACTTTCTAA
ATAGTGTACAGGCCTCCAGTCTCACCACCTGTCCCATTCTCCTTCTCTTTCCTTCTGCAGAGACCTAAGAGCCAAGCGG
AGCCCATCTCCTTCCTACACATTCTTCCAGCCTCTTTAGGACCTGATTTCACAACCTCATGTGCCACACCCCAGCTGCA
CCCTCCTGGTGGAAAGTGTTTTGCAGCTTCTTAAAGATATCATTCTGCTTCATTCATCAACCTTTGTCCATGGTGTTCC
TTCTGACTAGAATGTGTCCCCCAACCCCTTTGCCTGGTGAGACCCTCCTCTTCCTTTGAGACCCATCAGAAGGCTTGTC
TCTTCTTGGAAGCTTCTCACCCCACTCCAGTGCTGCATCCCTAGTTTCTGTGCATCCCCTGCAACCTGTGCATCACTTT
TTCAAACATCGCTCCTCAAGTAGCATTGTGCATGCTGTTTCTTGCCTTTCTCACTCACACAAATGGGAGTTTCCTGGG
GGCCCTTTGTCATCACCACCTGCCTGACTGGATACACTAACACTCAGCCTACCTGCCACCTACTTGGAACCTTACAGGT
GTTTCTTTGATTAATTAATTAATTCATGTTTTCTCCTCTTCTGGTCAGTTCTTCCACTTTACCTGTGCTTGTTTGGATA
TGCAGAGCTCTAGCTGGCGAGAGTGTCCTTCTGGCTAGATTGTCTCACCAAAAAGAGAATGGGTTTTCCCCATCCGGGT
GTCTCTTAATTTTTTCTTCCACTCGTGTTTGGACAAAATTATTTATTGACTGGAAGGACCACATGGCAACTCTTCATGG
CTTTGAGGCCCCTTAATGAGTGTCCAAGGGAGATTCTCTCTCACTTCCAAGTTCATGGCAGACATTTACCTACCCAGTC
AGCTTGAACTGAGCTCATAGAAGTTTTATTTCTGGCTTTTGCGGATCATTTTTTATGCTGTTCCTCTCACCTGAAGCTC
CCTTTCTATCTCTCCCTAGTTGGATAATAGTACACATATTAAATGTGTACCTTGTACCAAGTATGCTGAGACCTGCTTA
TAACTAATTTTGCTTGATCTTCATGAATAGTGTTTTGAAATAGCATTTTTCTATCCCTGCAGATAGGAAAACTAGAAAA
CAAAGAATAAGTAACTTCCCCAAGCTCACATGACTTGTAAGTGGCAGAGCTGGGATTTGAACCCAAGCCCCTCTGAAGC
TAAAGCCTGTAGAGTACATGCTCCCTTCCTCCACATCACACTGCCCCTGCTTGTTCACACTCAATGTGAGAATCCACTT
CTCAAGTTTGTCTTGCTTATTCCAACCTGTTTTGCAATGAATCTCTTTCAACAGCTCTATAGTTCCTGGCACTCACTTG
GCATCCATCATTTTCTATGTTGTCATGTTTGGTATCTTTTCATGTATGTAATGTGCATCTCTTCTTAGGAGTAAGACCA
GAACTTTTCTGCTCTGCAGTTTTCTCCCTGTGAGGGATGGTGAAACTTGGTGGCTAAGAGCATGGTTTATACAGACAGA
CTTCTTAGGTTTATATTCTGGCTCTCCTCTGTACTTGCTGTATCAGCTAGGGCTGATGTCTTCACTTTTTTATGATTCC
ATTTCTACCTCTGTACAATAAGGCAAATATGAATACTTACCTCAGAGTGTTGTTGTGAAGATGGAATGAATTAATGGCC
ATAAAGCACTTACAGCTGTGTCTGGTACATAGTGACCACTCACTAATGGTCACTTATAATTCCTTCACAACCTGTAAGG
GTCCTTTCCACCCAGGTGATGTCCCTATGTCTCAACTGAATGACTGGTTAGGGATATCTTTCCATGGGCTACTGTGGCT
GCAGATAATTGCATTCTTATTTGAGAGTTATGTTAACTAGTGTGGGCTTTTATTTGCTTCTCTCTTTCTATCAATGAGT
CCTGCTGCTTCAACCCTGGGTTAACTGAAATTTGAAACCTTTTTCTACTCAAATTCCTTTGATGCTGAAATTCCTCTGC
GGTCACAGCTAAGCACTTTGTGTGGTAACCTTCTCTTCTGTCCTCAGGCCTGCTGAGATCATCTGCTCAGCAGCATGTC
TGACACCTGTTGCCACCTCACCCAGCCACTTCCTTGGTGACCTGGCAATGCCCAGAGGGGCCCTGCCAGCTTGGAGCCC
TGTGGCAATGCTGTTTGATTCAGCAAACTGATAGCCTTCTGACATCCTTTCTTCATTTTAGCAGCCAAATCACATGCAC
CTTAATATTTATCAATAGCTAAGCAACACCGGAAGGAAGTGAGACAGAGCCTCTGGGCTAGTCACTATCTCTGATTTTA
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ATTACCATATGAGGAAGTGAGAAATAGGGTTTCTTTCTAATACACAGAAAATAGAAAATAAGATGCTTTTCTTGGCCAC
TGTTATCAGTTTCCTGTTAAGGTTCTGCTTTGTTTAAAACAGTCCTGTTTTGCTTAAAAACAAACTCTAAGGAATTTTT
CTAAAACATGACTCAACCTAACTAGGTATATATACTGTACTTTAAAGTGAACATATTTGAAATAATTGTGAGTGACAAA
GAGACGGAAAAACATAGATTTTGAAACTAGCATTATTCTAATGATTTTTATCCCAGTGGTTTATTTGGAAATGAATTTC
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GTCAAATCTCAAAAGATTGGCTAGGGCATTCTGATTTTACAGGCAAATTTATATTTGCCGTTTCAGGAAATAATTCCT
TCATGGTTATCTTTTATAAAGAGCTTATTTGTATAATATATACACATAGTATATATCAAATAAAAGATCTGGTGTTATA
AACATAAGAATAAGCAATTTCCCTTTTGTGATAGGAATATGAAATTCCTTCTGGTAGAGGACGTTTAAGAGCATGTCCA
AAGAATGGCTAATCAATGAATTCTCTCATTTTGTAAGGAGACACTTAGATGCATTTCTGAAAAAAACAAAACAAAACAA
AACAAAACAAAAAACACTTTGGGCTTTCTCTGTATTCTTCAAGCATTTCTAAACATTTATTGACATATGCAGTAGAGAA
AAACTGGTATCAGGAGGAAGGCAGTAAGTAGCCAGCAGTCACAAGGTACAAAGAATAAAATGCATGCAAACATGTACAG
TATTCACTTTCAGGAGTTAATCTACATTTTATTTAATTTTTTTTTTTTTTTTGACAGCGTTTCACTCTTGTTGCCCAG
GCTGGAGTGCAGTGGTGCGATCTCAGCTCACTGCAACATCTGCCTCCCGGGTTCAAGCAATTCTCCGGCCTCAGCCTCC
CAAATAGCTGGGATTACAGGCATATGCCACCATGCCTGGCTAATTTTTTTGAATTTTTAGTAGAGACGGGTTTTTGCCA
TGTTGGTCAGGCTGGTCTCAAACTCCTGACCACAGGTGATCTGCCTGCCTCGGCTGCCCAAAGTGCTGGAATTACAGGC
GTGAGCCACCATGCCTGGTCCCTTTTAAAATATTTTAACACTGAGACCATATTACTGATGTACTACTTCTTTCTAAAAG
TAATTAGAATAAATGTACACCCTCTTCTTTAAACTTTGCATTTTTCAAATTTCCAAAAACAAAAACTAATTATAAGTAA
ATCCATAAGCAAAACGCTGTTAATTACCACTTCCAAAATCTGGAAGCGGTGACTTGCTTTACTAAGACAAGAAACTTTA
GACAGGTGAATACTTTTAACAAGGAACACACTTAACTTTGTCTAATTGAGCAAATTACAAATCAGAGCTAGTAGCTTGT
TAATTATAAGAATATCTCCATTACTTGAATACGTGTACTAGTCATGGTAGGCAAAATAATACTCCAATAACGGACGACC
CCACTGTGGATCTGAGAACCCCGCAGGCCAGCAGTCTCCATGTGATTGCCAAAAGCAATGCCGCCATATAAACCACAGG
TGTCTACCTTCACCATGACAGAAGAAAGGGTTAGAGATTCCAGAAGTCACAATTAAATGCTTCCACCCCGAAAAGTGGA
TCATATTTCATTTTCCAAAGCAATGCAACTTTGTTAACCTCAAAGAGGCAGGGAAGTACAATTTTCCTGTGGGGTTGGA
AGAAGAAAACTGGAAATTGGTGAACAGTTTTGAAATGTCTGCCATAACTTTTAAGTGAGGAACTTAGTGTTCTCTTACT
CTGTCATGTTTTTAAATATCTTTTTGATTGAAATCTTTCAAGGCTTTCCAGATCCCTGAAGATAAAATACAAACTCTCC
AACAAGACCTTTTGGCCATCAGGAACGCAGCACCTGGCTCTCTCACTAGTATCCTCTCTCTGTTTGCCATGTCCCATTA
AGACTGTCTCCAGAAACAATGAATTTATTGTTGCCTGTTTCCTGCTAGCTTTTCCCCGTATTTACACAGTTTGCTTTAT

Fig. 9.222

CTGCTGGGATTACCCTTCCCTGACTATGCTCAATCTCTATCTCCCTTGGCAATTCTCCTCCAGGCCCCAGACCTGAGAA
CTGGACCAGTGCTCTGCTCTCTCCTCTGAGCTTCACCACATCCTGTGAAAACTTGAACCTAATTCTTACTAGGTTTTAA
TCAACTGTTTACCTGTCTTTTCTCCCCACTAAAGATGAAAAGTCGCAGAGATAGCGGAGAACAAGAACCAGATCTCACA
GTCATGGTGCCAAAAGAGTATCTAACCCTGAATTGGAGTTCAATACATACTTGTTGAATGAATGAGTGAGTGAATGAAT
GAATGGGTTTTTTTTGTGCTTTCATCTACCTGATTGGTAGCATATTCAGGACAGTATGTTTTTCTCACCTTTTTACATG
CTATAAGACATAAAACAGATAATGCGTGTAGTGGGTTCATAATAAAGGTTTAAATAAACTTTACCTACAGTTTTATCAC
TAGGAATATATTTCTGATATCTATTACCTTTGAACTTTTTATGCCAGATTATGTTTAAAAACATGGTGTCACTCGTAAG
CCACATCTGGGACTGATTTTCATGGATTGATTAAACTTTACATTTCTTCGGAGTATTCACTGCCAAGCCCCTCTGGTGC
CATGTCCTAAACCAAATATTTCAGAAACATTGCAAAACAAGGCTGCCCTTGTGCTTTGGAAACGCTTTCAAATGACATG
CCATTCCTTTCAACTTGAATCTATTAAAGACTTGAAATTGTAGCAATCCATTGGACTATATGTCAAGAAACTGGTATTT
TTAAAGGGTGGCATGTTTCTTCATTTATATGTAAATTATTTCCATGTGCTTTGGAGAGAAAAAATGGAAATTTTGTGAAC
GTACTTAGCCCTTAAAGAATGTGATTGATCCTTGATGATGTCGTTCCAGACAACAACAAATACACAAGAACTCTTTTTG
AGTGCTGTAAGAAGCTTCTCAAAATTTCCAGTATAATCCTAGGAAAACATTTTTTTTTAATCTTTTCTAATCAGGAAGT
CTTTAAAGTGTATTTTATCAAAATGTTCAGTATTGTGGAAACATACTCATGAGCTATTAGCTATAGCTGACTTTTGAGG
TTATAGGTGAAAAGTTTTCACATCAGGAAGTTTCATGTAGAACAACCAGCGTCATTCACGCTCATATCTGTGGCTTATA
TCCAAGAGGGCCACTGGAGGCTTAGGGGCTTTGAAGTTAACAGCATGAAACTTCTCCAAAACAAACATTTAATTTTTTT
CTGTTCGTTTCCTTAAACAAAGTCCATGTAATAAATGAAATAATTTGAAGAACATTGTAATGAATCCCACATACCAGT
GGGTCCCAAATTACTGGAAATCATAACATGGCTCATGTGAAGAAAGAATTATACTATTTCAAGCTGTTGTATGTTAAA
CTATTATAGTAAGTAGCATAATTGGCATATATTTTAGGCCGTATTTTCAATAAATCAATATTTTTGCTCAAAAGGCAAA
ATTTAATAATTTAATAATCTCATAAGGTGAAGGATGGACAGGTACCATGTTAGGAATTTGACATGTGTTGTTTGCTAAT
AGACTCATTTAATAAATGAAGTAAATGATATTAAGCAGTTTCCTCATGACCACAGAGCACAGAGCCATAATTTGATTTA
AATATGAGTATTTCTGGCTCATGCTCTTTCTCTTTCTACCTATTGCCATTAGTGAAGGCTGCATTTAGTTTTTTTTTCA
AGAAGTGTCTAGCTTACAATTTTGAGCTTCACTACCCCCAACCTCATACACACCTCATGTGGCTTAGAGCTATATAAAA
TCCATGTTTTTTAAATACTTCTAAAATTGGACATTCATATTATGTGTATGATGTTTTACATATAGTATGAGTGCAGTGA
AAGTTAGTTTCCTTAAGTTTTCCTGAATTCAGCTGTTACCCTAGCATGACTGCTTCAGCGAAGAGATAAGAGCTTCTTT
GACTTTTTCCACTGGAATTTTTCATGCCAGAAGAAATTGAACATGTGAGCCTGGTGTCTGGAAGAGTAGCCTGGATTTA
TGGTATCAGATGCACATTTTTAACACCTTCAGTTTTCTCTTTAAAATATCTCTTCAATCCCTTACTTTTCTCTATTTGT
TTCAACATTAAAATATGTTATTTTTCTTCAAATTGTTGGCATTGACACCTCTTCTACAATTCCCAGTCATCTGCATGCT
ACTGCTTCAGAGGAATAGTCTTATATATAGAAAATACTTTTTTTTTCTCAGCACATTTATATCTAAACAAGAGAATGAT
ATGCTTTTACCCAGTTATCTGCGTGGCTCACTTCCTTCAAGGCTTCACCCCAAAGCTACTTCAATGTAACATTTTCTAT
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TCATTTTCTGATATACCTTCTAATTTACCTATTTATTTTGTTTAATATTCATATCCCTTCGACTGGAATGTGAACTCCA
ACAAAAGTTCATATTTATTGTCTTGTTGTATCTCCATAGCTACAGTAGCACTTAATATATAGTAGATGCTCAGGAAAGA
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ACCTTACGGTTCCTGTACAACCAGGTGTATGCCCTCTAGAGCCACCAATAATATTCCAATATTAAATATACATAATTTT
ATAAACAGGTGTGATTTTAATGTCTCTAGACCTTTCCAACCAGAAAAGCTGAATCCAGGTACTGCTGGTCTTTTTCCTT
CCATAGGTTCTCATTTTCCCTGATGCAGTTATTGCCTTTTCTGTTTATACTTTCTTCCCTTTAGGTGACTTCACTTACA
AATATAGGAATGCTGATTCATGTTTAGCATTGTGTGGTTTCAGTATTTATTTTCTGTATTTCCACATTGCTATTTTAGC
TCATTCTTTAATTAAATAAAATGCCTTATTCTCTCACAGTATCAGCAACTAAAAGAAGGATACATCACCTACAGTTGTT
AGTGTGAACTGCTTATATTAACTCATAGGATATATATTGGTAGACATAAACCTACTGACTAAATTATTTCTGAAGTATA
CTCTACAAACCATCATTGTATTTTTACATTTGACAAAGTGGAAAAAAAAAAACCTGGCCACAATCTTTAACCCTGCCCA
GTGTCTCTGGCTTTTAGGCACACAGCCAGTCGGCAATGGCGGCAGGGGTGGCATATAAAGATTCTAGATCTCAAAATGC
CAACCTGGCCAGAAAATAAAACTCACTATGTGATACCATTGGAACAAGCTTCTATACCAATGTAGGGGGTGATGGAGGA
TAATATACATTGCAAATTTATGTAAAACCAGACCATGTGGTATTTCCAATAGTTGTTACAACATTGCTTAAAATGATAT
AAATGGCCTTATGGATAAAAGTAGAAGTTTAATTTTAGAATAGTTCCTATTTTAAGACTAGATTTAGCAAAAATCCTTA
TGGCATATGTTTACTCTTGGGGAACCTTGAGAGATAGTGAACAAGAAACGTTAGATCATAGACTTCTTGGCTGCAAAAA
GTTTATTTATTTCATCATTTTACTCGTATTCCTTTTATTATTTGAAAAGCTTTGTATAAAGGATTTTTAGAGATGGCAT
TTCATTAAGGTTATATTTATTAGAAAACAAACTTGAATAATTTAAAATTACAAAAGGTAAGTCATTTTATGTATTTGCC
TACTTGTTTTTGTTTTCTCCCTGCCACCCTCCCTTTCTTCCTTTGTCCTTCCCTTCCTCCCTTCCATCCTTCCATCCTT
TCTTTATTCATGCCCTGCCTATTTAGAAAAGGATTTGCAGTAAGTTACAAAAAGTACAAAGTCAATAATTTTTTTTTAA
TTCAGAATGTTAAAAAGAGAAAATTGGGTGAAGAGAAAGTGAATATTTCAATAATAAGAGTCATAGTGCTTCCTCTGAA
GGAGCCCAGAAACCCATCTCATAGTTACGTGGTGGCCAAACTTAGCAGGAAAACAAAAGAAATGCTAGACGAGAAGAAC
ACAACATCCATTTCTCAGGAAAGACTAAGTTTTCCTCGTACAGAACCCTGAAATGTATTCTCCCCTGGGATACTGTTTG
GATAAACAGTGAGTGCTGTAATAGTCAATGTCTTTACCCACTGCTTCACAGCAAAGCAGAATTCCCAAGGTAAGAATGT
GACCATGTAACCTCATTGCCTCACCATTGTTCTCTCCACTCTAATATTTCAGTACTAAATGTGTGTGTCTCTTAGGGTT
GCTGTGCTGAATAAGTGAGAGTCACCTGGCACAGCAGACATCTAGTGTGTGCTAAAGAAATGTACAGAGAATGAGAGAG
AATTTGAATAAAAAATGTAAATAGAATATTATACAGAAGTTAGGAATTAATTCACAAGTGTGTAAGAGATACTCTGTCT
CAGATGTGCAGGCCACTAGTAGTGCAGTGTGACACTCACTGCCTCTCAAGAGAACTTAGTAGTCAGAAAAGTGAAGAAA
TGACATAGCTTTTTTACACTATATTATGTAGAAAGCTTATTTTTTAATGTTAACCAAGAGCAAGGTCCATAAACTCTAA
TACCTTCCAGAAAGCACAAAAGACATTGAGATACATTTAGAGAAATAGAGGAAACTGAGCTAGATATTCACGTGAAATA
GGATCATTCCACATCTTCCAGCAAATAAATTGAGGTGACCAAGGTCCCAGGGAGCACAGATGGTCATATTCTAATGAAG

Fig. 9.223

CTCTGGCTCAAAAACACACAAGCTGAAAACAAGGCGAGGATGCTTCATAACAATGTCCTTTTGTAGGAGAAGTGAGGAT
TAGTGATGAGGGTAGGAGTGGAGCAAGAGACAGGGATTAATTTGCATAGCCACCTTGGAATCCCAAACTGTCAATGGTG
TCAGTGATGCTGTTTGCTTGAGTCCCTAAAGGGTTGAATGAAAGAAGTTAACTAGATACAGAGTTCACAGAAGGTCAAT
AATCTTAGCTTTCCAACAAGTTGGAGATCGGGGTAAGGAGAAGGGCAGACCTTAAGAAAAGAGTTATACTTATTGCCAG
GAAACAGTGCTTCCTTTTGCTGTTTTCCACAAACAGATTTACCTTTGCCCTATGCATTTCATCTTATTTTAAAAAACA
AAACTTTTATTTTAGGTTCAGGGGTACATATGGAGATTTTTTTAATATAGGTAAGCTCCTGTCATGGGGGTTTGTTGT
ACAGATTATTTCATCACCCAGGAACTAAGCCTACTACCCAATAGTTATTTCTCTGGTTGTCTCCCTCATACCACCCTC
CACCCTCTGGTAGGCCCCAGTATGCTGATCCTCTTTGTGTCCATGTATTTTCATTATTTAGCTCCCACTTACAAGTGAG
AGCATACAGTATTTGGTTTTGTGTTCCTGCGTTAGTTTGCTAAGGATAATGCCTCTAGCTCCATCCACGTTTTGCAGAG
GACATGATTGCATTTTTGTATGACTGTATAGCATTCCATTATGTACCTGTACCACATTTTCTTTATCCAATCTGCCATT
GATGGGCATTTAGGTTGATTCCATGTCTTTGCTATGGTGAATAGTGCTACAACGAACATATGTGTGCATGTGCCTTTAT
GGTAGAATTATTTATATTCCTTTGGGTATATACCCAGGAATGGGACTGCTGAGTTGAATGGTAGTTCTGTTTTTAGCCT
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AAAGGGCCCTAAAGCCTCTATTGTCAAGTATGACTGACCTCTCTTGGTAAAGCGAGACCTAGTTCTGACTGAGATTCCT
CCAGTCGTTTCATGGTTAACTTTCCATTCAGTTTCAGTTGTATTTCATTGTGTTTCCTGCCCAGTGGAGATTCAGCATA
GATGACACCTAAGGAAAAAATGCTAGTCATAGTGTGAGAAATCATAGCCTTCTCTTTCAAATGCTTTTATTCATATTCCT
TTGGACTTGATTTTAGATATTGCTCGCCAAATTTAGCCATCTTTCTTGGTAGACATTTCTGAAAGTTTAGTGATTAAAA
GCTTAGAGTCTAGAGTTAAATGGAGTCTAGAGTTAAATAGTCTGGGTGTGGACTCTGGCCTGGTCACTTGCCATCTGTG
GGCAGGCCACTTCTTTAAGCCTCAATTTCTCCCCTAAAAAATGGAGGGGGATGGGGGCCATCATGATACTTACTTTAT
AAAGTGGTTGTGAAGATTCAAGGAGAAGTTGATACATATAAAGTTCTTAGAACAGTGCCTGGCAGGCTGTAAACAACTA
TAAAAAGTTAATCATTATTTCAGAAAAAAAGTTGAGTCAAACCTGAAACAGTGGTACAATGTCAAGAGCAGGAACTTT
GCCTTATTAATTGTGTCTTCCTAACTCTATGGACTTAGGATCTGAGACTCTAGTTCCTACAAACTCATCCATCCTGGGG
CCTGGCATATGGGAGCTATAAACCACATCAGCCCTCCTTTGCTCTTTTTCCTTAGGGCTGCCCTGAGGAAGAAAGCTAA
TGTGTATAACATCTAGCATTATGCCAGGTATGTGGCCAGAGCTCAAAAAACTATAGCTATTATTGTATTATATACTTTG
CTCTATTTTTTATACTCCTGGTTAATGACGGAGAGCTCTGTGAGGGGCTGCTAGAGGGAAGGTTCAATTATTTTAGAAG
CTTTAGTTCTTCCACATTTCACTTTGTAATGTTTGCCTTGCCTTGTATTTATTAAACAATAGTTTACTATACTCGTTCC
TAAAATATTAAGTATAGCTTATTATGCCCTGTTAATCTTTCTCAGTGGCATACAATAATTTAAATATCTGCTTGAAAAA
TCTCACCAAGCATTCATTTTAATGTGGCTTAGAATGTTATATAATATGAAAAAGTACGTGTTCTTTCAGAAATTAGTTC
CAAAGAACTCCCTATATCTAGAGACAGGCTGTGAGAATGGAGAAAGTTGAGGAGTGTCTCTGTTAGGAATCTTACTACT
GCTTTTAAATTTCATGGAACACCTATTAAATTGCTTCGCAGCTAGGTTATGAGGAAGGGGAGCCCTGCTCACTCTTTTA
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CATATAACTCTTGGGGGATGGCAAAAACTTGAGAGAGGATGCTTTATTTCTCACCTCCTAAAATGCCTTTCCCAGCTTT
CTGTGGTGAGAGAGAATGAGACAGCAGTCATACCTAACAGTTGGTGAAACAGTTCTATGGGAGTGAGGGAAAGTGAGGG
GCCTAGGATGAGTCAGAAACATGTACATACGGAAAGGGAGAGAGACAATCCTGATTAAATTGTGCCTTCTTGCAAAAAT
ATATATATTTCCACATTTGATACAAAGTGAAGTATATAACCTTGACAAAGCGATATCTGTCAGAAAAAAAAATTAGAAAA
ATTGCTTTAAATAAACAGTCCTTCAAAAGATGTCAGGCACAGAGACTTTCTGAGAAAATGTTTCCAAACTTTTAAGGAA
CAAATAGTATGTTATATAAATTTTCTAGAGTTTGTGAAAAGAAAATCAACTTTTCAATTCATTCTATCAAGTAGACCTA
TTTGCAATAAGAAGGAAGTCCCTCAACCAATCTTACTTTTCGGTAGATAAAATCTTAAATACAACTTGGTAAATTGAAT
CTTGCATTTTGTTAAAAGATTCATGCTCATGTCAAATAAGGCCGAGTCTGTAAATGTACATATAGTTAATTTTGATCAA
ATCTGGTCACAGAATCCATCATATTAATATGGTGAAAGAAAAAGCAATAGACTTGTATTGACAGGTGCCACAGTGGCAT
TTGACTAAAACTTAATATCCATTTGTTGTTAGTTTTTTTAAAAGGATGCAGTGAAATAGCAACAGAAGAATATAGTGT
TTATTTCAATGGTGAAACCAATTTTTAAGTGTGAGTCGTTTCTATTAAAGTCAGCTTAGTTATAAGCAATAAGACGTAA
CATAATATTTGTATGTAATATTTGTTTGGGAAGTTGTATAGTTATTGTCAAGTTATTGTTCTAGTACAACAACTTGAAA
CATAAAATATAAAATGAAAACTGACTTTATAGCTATGTGGGTATTTACCTGGAAGAGCCAAAGGAATTAGTTGAAATGT
TATTAGAAATGATTCAGTAATTCAGATAGGTAGCCAAATACAAAATTACATATAAGAAAGCTATTAGCTTTTTTATAGA
AAGTAATAATCAGTTAGATATTATAATGAAAAAAATAAAATACCTCTTTATTTACTTACTTTCTTACTGTTGTCCAGGC
TGGAGTACAATGGCACAATCTCAGCTCACTGCAACCTTCACCTCCTAGGCTCAAGCAATTCTTCTGCTTCAGCCTCTTG
AGTAGCTAGGTCTACAGACATCCACCACCACCCCTGGACAGTTTTTCAAAAATTTTTTGTAGAGATGGGGTCTTGCTGT
GTTCCCTAGGCTGGTCTCAAACTCCTGGGCTCAAGCAATCCGCCTGTGTTGACCTCTCAAGGTGCTGGGATTATAGGTG
TGAACCACTGTGCCCGGCCAATTCTTTTTAAATAGCACAAGATTCTAGTCACAAAAACATACTACACCTATATTTATGA
GTGAAAATAATAAGAAATTAGAAGGGTTTTTTTGGTATTGTTGTGAAGAAAACAAAAATGTCTTAACTAATGCTAAACA
ATCCACAATATTCATTCCACTATAGGCAATTCCAATCACATTTTATTTTTGATTTTAATAAAGTATTTCAAAAATCAAG
CTAACATGGGAAAATCAAGAAAAAGTTGAAATAAAGCACAGTGGGTAAAGGTTGGAAGGATGTAGAACACACCATTCCA
GAGATTATATCATAAAAATTACAGTAACATATATCATGTAATATATAATATTGTAAGAATTAGGACGGTGGCTCAAATG
AAGAATTAGATAAAGTTGATTTGGATAGACTATAGATTTCAAATAAGACTCATTTATGTATTTGTGTGTGTGTGTGTGT
GTGTGTGACTGAAGTAGCATTTTATTCAATGAGAAAAGGGATGATTATTCAATAAATGGTGTTGAAAGCAACAGCTATC
GTTTGGGAAAATAATATAAAGTTAGATTCTTTCTTTAAACCTTATATAAAAATATACATTGGATATATATATTTTATTAAA
TATTTATTTAAATAAAGATTTCATTAATATATAATATATATAATTTTATTAATGTAACAACTAAAAAGTAGTTTAGTTAAA
ATTACTAAAATAAAATAAAAATGAGTATTTAAATTTCAACATAGGGAGGATATTTCTAAGCATATCACTAGAGCGAGAA
AGCATGAAGAAAATGTCTGATAGATGTGTATACATTAAGGAATCAAATTTTTCTACACATCAAAAACACCATAAAGAAA

Fig. 9.224

ACGTAAAGGCAAATGAAAAGGGTGGGATTCTATTTCCAGTGTTACTAAAGAGACATTGACTTTAATGTCTTAAAAATCC
TTAGAAATCGTCCAGGTGGGGTGGCTCACGCCTATAATCCCAGCACTTTGGGAGGCTGGGGCAGGTGGATCACGAGGTC
AGGAGTTTGAGACCAGCCTGACCAACATGGTGAAACCCCGTCTCTACTAAAAAATACAAAAATTAGCCAGGTGTGGTGG
CACGTGCCTGTAATCCCAGCTACTTAGGAGGCTGAGATAGGAGAATCTCTTGAACCTGGTAGGCGGAGGTTGCAGTAAG
CTGAGTCATGCCACTGCACTTCAGCCTGGGCGACAGAGTGAGACTCTGTCTCAAAAAAAAAAAAATTCTTAGAAATTAA
TAAGGAAAAAAATGACCTTTCTTCCAGGAAAATGAACACAATCCATAAGAAACACAATTGGTGAGTTACATGAATAAAA
CCCCAACTTTAAAGAAATACAAATTAAACAATAGTGAACTAACATTTTCTCTAAAGAGTATTCAAGATTAAAAAACAAA
GTCAAAACTAGATGATAACAAATTCAGCGTATTGACTAAAGTCAGGACATTCTTATTCATTAGCAATGAAAGTGAAAGT
TTGAGTAGCTTTCTAGAAGAGAATTCAAGTCACACTATGAACCAACAATTTTACTTTGAAGAATTTATCCTAAGAAAAA
AATTAAGAATATGTGAAAAGATTTAGTTACATCAATGTTTATTATAGTGGAAAACTGAAAATGTGCCAAGAAAAAAAAT
GAGCCAAATATTCAGCAGCGGGAATTAGCACAATATACCTTGATATGTTATCAAGGTAAATGTGTATGATAGGATACTG
ATGCATAAGGATAATTTTTAACATGGTAGATTTTCATTATGTTAAATGAAAAAATAAAAAATACATAAAATGAGAGCCC
ATTTTTATAATAAAAAATATATAGTCATTCAAGGAAAACATGTAGACGGACATCACAAAATACCAACAACAGGTATGGT
TCAAAGTGTTATAGGTGGTTTTCAGCACATAGATTACCCCTAGCAAAGAGACCTCTGTGACACTTCGTTTCTTCATCTG
TGAAATAAAGGAATCATACTAGATTAGTTCTAAATGCTTTTAGCAAAAATATTTCATAATTCTATGAGTATTGATGGTT
AATAACCTTGAGAAAATTGTTATTATTTATTGAACTTTGGAGTTAGTAGAGTAAAACCAAGTTTATCCTGAGCTATCCC
TTGTTTTAGTTAAAATTAGTTAAATTTAACATCCTGATGTTTATTTATAAATTGTGCATGTGTACATGTGTGTGTTTGT
GTGTATATATATATAGCGCTTTCTCACAAATGCCTGTTTTGCTGTGGAGTGGGTTGGGTGGGTACAGAGTTTCACTGAAAT
GTATATTCCCCTATAGAATTCTTAGAGACACAAATATATCTTGTTAATAGGTTATATATATTTTCATGTTTCATCTACC
ATTTGAAACCCTATAACCATTTGAAATCATTCTTGGTTTTGGTAGGTTTCTTTAATTAACATTCACATTGAGAAACTAT
AAGAGATTCAACCCTTGAAAAAGTCCTTTTGCTAAAGAGATTTGCATGTGCTCTAAAAATTGGTGGAAAATGGTTCTGC
TCTAATCAAACGAATGTCACTCTACTCTTATTTCTAGCTAACAGTAAAACTGCCTGGAAAATGATAACGTACAACAAAT
ATCTCAAGTGGTTATTTAGTACCTTGTTGTGATAGTGAATGAAAAACACACTCAGTTCACTCAGTTTTAATTTGCTGTT
GAACACTTAACATTTCACAGTGGCTGGCTGTTTGGAGGCCATATACAATGGTAGAAAAAGTAGCTTTCTAAAAGTGCTT
TGCCTCATTCTTGCTTAACCTGGCAGACGTCATGAACTTCCAAGAGGGAACATATTTTATTTGCCTTATACCACCAGAG
GACTTGGCCAATTATTGCTATTTATTTAATGTTGGTGTTGACATAGTGCCTTTGCCCTGAGGAGCTCCAGGTGCTTTAT
AAAATTAGTCAGCAATTCACCTCACAGCCTTTACGCCAGAGAGTGAACATTGAAAATAATAATGATTCGTGGAACCTAC
AGCCACCCCTAACTCCTATTTCTGTTTGCCCAGTGAAACAGAACAAATATGCCCAGTTCCCTCAGAGAGCTAGCAGAAA
AAAGTTCTAGTGGGGTGTCATGGGAGTTTCTCTCTTGTGTAACTAGGTGAACTCCTGTAAGGAAAATTTGCCATGCACC
CTGCAGAGCTGAGACTTACTATTCTCTGTTGTAGGACCCATACTTTCCCCAGTAAGGAACTCCATTTTTTTTCAGGCCT
TTGCTCAAATATCACTTTCTTAATAAGACCTTTCATGACCATCTGTTTTTAAAAACAACTAATCAAAACCTATCCTCAA
GTGCAGACTTTCTGTATCCTCATTCCTGCATTATTTTTCTCTGTAGCACATGTAGCTATTCAGCACACTTAGATTTTTA
TTTATTTATTAATTAAGGGTTGACTCCATCCCACCAGATCGTAAGCTTTATGAAGGTAGAACATTTGTCTATTCTGTTG
AGTTATGAATCTTTAGAACCTAGGTGGGTGCCTGGTACCTAATGGGTGTGAAATAAGCATTTGTTGAATGAATGAGCGA
AGGAATGAATGAATAAATAAATTTTCCCCAGTGGAGCAACAAGCAACAGTTGGAGTCCCTTGTTGTCAATCAAATATAA
AGATAGCAAAGAGTAAGTAAGCAAGAGTGAACTTGCATCATATCAAGATTTCTTTTATATTCCTTAACATTGAAAATAT
TCATGTGGTGAAATACAGTATTAGAGTTTTCTCCTTTAGTTGCAAATAATAGAAACTGAATTTAAGCCGACTTAAACAA
AATAGCAGTTTGCAGGATCTTGAAACTCAAAAATTCAAAGGATACAGCTAGTTTTAATGGTTGTGAGGATTGCTGCAGG
CCCTCTCATGATTTGATTGAGCGTTTGTCTCTGTCTTTCTCTTTCTCTCCTTCTGTCTCACTGTGTTTCTAAGACTTTC
TCTATGTGGTAGCAAAGAAAGCTCAGACAGCACAAGGCTGCCTGTAGTAATTCTTGTGACATGAGAGCATACATCTCCC
AGTAGTTCCAAGGAAAACCCAGGGCTGACTTGAAACGTGTGCACTTGGATTACAGGTCAACCTTGAGTCAATTGTGACT
GACTGACCAGGCCTCTGTGTGTCCCGGTTGTGGAGGTCAGTTCCATCAGTAGGAGGGGGATTAATCAAAGGAAAATCAG
AATTCTTTATCAGAATAAGAGGAGAAGATGCATGACAAGTATTCAGAGATACACTGTAACCAGAAAAAATGGTCATATG
TGAAGAGTATCTCATTACAACAGGGAGGAATGTAGTTCTAAGTCTTTTAAAGTTCTGCTTTCCTATAATATCAGATGAC
CACATATTTCACAGCATAATTGTGAAAATGATATTTTGAAAGGAAAAAGGAATTCTTATCTGAGATAAAACTGTCAAAA
AAGTCAAAATTTGGCTGTGAAAAAAGTGAACGTTTACTTGAGGTTGTCATTACTTATTTCCTTCTTATATAATTCATAT
AATTCTATATTATTATGACATTCATATAGGCAAGGTGTTAAATTCTAATTTGATTTTATAATTTTTCAAAAGAGACTTA
GAATGTGCTAGAAATCCTAAAAATTTCTGTTCCAACTATTGGTATTTGAATTATGTATATACTGCCCCTTTTTTTCCTA
TAAAAAACTGATAGAAGTTCATAGATAAATAAAATTCACAGATAATGTTACAAATTTATTTCAAATGTTACTTCTTGCC
TTTTTCTATGCCAAGATACTTAACAAATACTTCAAAATTGAAAGTATTTTTACTCCTTATTTTATCTATTCCACAGAAT
AGTTAGAGGTAGAGGAAGAATTAGATAATATATTTATTAATAAGTCAACATCCTATTAATGGATGAACATAGAACCAAC
TCATAGGCAACACAGTCAGAAAATCAAGGTGTGGCTTGGTTGGCATGAAAGCATAATGCCCACAAGAACTACTGTTGTT
GGTTATGCTGTACTGTATGAGAAGGGCATTTCTGACGTTAGCTTTGATACTAGCCTTTTAGTAACTGAGTAAAGTTAGT
GAGTATACTCACCCAGTTCAGATTATTAATTCAGTACTAACTCAGTAATTTGGTGTTACTACATACTGAGATATCCAGC
TGGATTCAGGATTTGCTCAATTCAATTAGCAAATCCAGTGTTAAGGGGAAAAAGAAGCTTTGTGGGTAAGCATTTCTAA
ATTGGTGTTTTTATGAAGCCACAATATTCTGGTAGTTCGTCTTTTCCTTCAGTTCTCTGAAGTTGTAATCATTTCTAAA
TTGTTGCTTTCTAGGTAAAAGATGTGAGATAGGGGAAAGGAAGGCTTTCTTAGGAATTTTTTTTCTTTCATTGCCCAGT
TAAATTGGATTTGTGATTTATATCCATTCATCCTATTCATACCCATCATATATCTGTATACATCTGTCATATATCCATC
CTGTTCATATCCAATCCAATTCATAAGACTTTTCCATATTTTTCGTGAGATTAGATTTTTTTAGTGGGTGAGAAGAAAT
AAAAGGCACATAATATTAACATGCTCCTGGCATTCCAGCAACGAATAATGCCATAGCAATTTTATAAAGATTAAAAATA
CCCTAGCTCACTATGATTTTGATGAGCGCAACGCACTTTTGGCTTTGTGGGTCCCCTCCTCATAAAAAATACAAAATTA

Fig. 9.225

TATTTTGTAGCTGCATTTATGTAAAGATAAATATAATCTAAACTGTTTTGTACTCATTTTTTCAGATTTTAAAAGAGAT
TTAACATTTCTATGAGCTCCTAAAATTATGAGCTCTAGGAATAGTGCTTACTGTGCTATTGGATAAACTAAGCTGGCAT
TGTCATAGCTAAATTGGTTACATTTTAAGCTGTGAATGAAAGGGAATTTGGTAAACCAAACAACTGTTGTATGCTTATT
GTTCATTCCAGTATAAATATATTTTTGCTATTAACATTAGTTATTACAAGTGGAATACGAAGGGGTGGACTCAGGGTTT
GGAAAGAGAGTTAATGCAAGTGAGTATTTGACTCCATCAACAAAACTTTACAAGTAAAATCCTCAGGTTTTGTGCCTGT
AATCTTTTTACAGGATTTAATGCTATTTTACTTCGTCAACAATTTTTTTTTCTTCAAAGATTTGTATTTTTAAATGACT
GATGCTATGAAAGAAAATACCCTCATGATTATATTTATATTGTGAATTTTTACAGTAGGGGCAAACTAGAATTTTTCAT
GCGGAGAGCACTTTGGGTTTTACTCAATATAGCTCTTCAAAGTTCTTCAAAGTTCAAAGTAAAAATTGATGCTAGAGTA
ATTTTCCTGTAATCTAGGTGAAAAGCCCACATATCATTTAACAAAGTAAATGCTCATTCATATTTAATACAAACTCTTT
TTTCTTCTGTTGAAGCTGACTTTTATCCAATTTTTAGTTTCCAGTTATCTATGGTTTTGGGAAACAGAGCTAATTTGGA
TTCATGAATTCTGTAAACAAGTATTTCTTGAGAAGCTCCTGGTTGTGAACTACCTAGAATGAAACTGGGTAAACTAATA
TCAACATCCATTCTTTTGCCAAACATCACTGATAAACTGCAACATTTTTTTTTTTACGTGAGTGGTCTTGGAATCAGAC
ATTTCTGCATTGAAAACCCAGCACTGTTGCTGACTGGCTGCATGGCCTGCATCTACTTCTCACATTTCTGACTGCCTAC
CAGGTTCCAGGCACTGTTCTAGGCACTGAAGATGAAAAGATGAATAATATGGAGTTCCCATCTTCAAAGAAGTTACAAT
TTTAAGGAAGACTGGCAAATAAAAGTTACCCCACAAAATAATAAAAATACAGGGGTAAAACTAGGGCATAGTTATATTT
TGGCTGGTCTCTTTACCTCTGAGGTTCTTTTGCTTTTTATGTAATTGGATTTTAACCTCAGAAGACTGTAAGGTTAAAG
ATGATAATGTATAAAATCAGTACTCTGAGTAATGATCAAAATTTTCTGTTGCCATCCACACATTTGAGTGAGATGTAGT
GAGTGCTAGAAAATAAAGCAGTTCGTATCAAAAAGGGTGTGTTGAAAGAAATAAACTAATCCTTGAGAAACACTGTCAT
GCAATCTCATATCTAGAAATTGTGCCTATGTTCTGTCTATAAATTGATGAATTGGCAGGGTGTTACATTTAGGACACAC
ATTGACACTACATATGACATTTGTAAAAACACTTGCTAATTCAGCTAACAGCTCGCTTCTCCCCTTCTCCCCACTACTC
ACTGTGGAGAGAGCTTCCAGCTAATAGCTTAGAATCTCCCAGACTAACCAACCATTGATGGAACCAGGTGCTATGTGAT
TGTAGGAATTTATTTGTTGCTCTGAATGTTAACTAAAAGTAATGGGCTTCTTATTTTGTCCTTTTCCTTTTGTGTTATA
GACGGCAAAGACTGTTTCTCATCAGTCTCATATAGCTAAATTAGATTTATCTCTCATGCTGACTGATTAAAAGGGTTAA
ATTCTGGGCACGTTGTCCCCTGAGTCCTCTGAAATCCATGTCAGAATAGAAGTGCTCATTACCAGACTCGATGAGGAGC
TCCTTTTCCAGAACTTCTCTCTGCTACACTCTAAGGACCAAGCACCTCTGCCTAAATTCCAAGCAACCATGGCCTGTGG
CAGTCTTGGAACTTTTGCCCTCTGGCATGGGTAGAACTAGCGTCAATTGGGTAATTCAATCCCTGAGTTCCTTCTTCAA
TGAATGAGAGAATCCAGGAATGTGTTGCCAGTTGCCTTTTCCTTGTACCTAGTTTTCCTTGCTGCAGAATGATGACAGT
CTATTTCCACACCTCCCCTCCTGCCACTACAGGATTTATGGTCTGCATGCCCCAGTTGTGAAGCTGGCATGTAGCATTT
TGTTGCCACAGGCCTGTGAGTGTTTAGAAGTTTGTGTTTGTATTTCCAGGGCTACAGTTTGAATATTGAAGGAACAAAC
AGCAAACAATTCAGAGGTCAAGCTGTGACTGCTTCCTCATTTGGAGAGCTTATTTTATGTCTGTATATTCTATACTCAG
ATTCCCACATAACTTGTTTTTTCCACCTTCATTGCTTTGGTTAGATGCTTTCAAGTGCATTTTTTCTCTAAGAAATCTC
CATAGAAGAGTTGTTTACTTGAAGTGATGGGTGAGCAAAGTTTGCCTGACGTGGAACCTCAGTAACTTTCCCCTAAGGA
AAAGTTCTGGCGTGTAGGGGTGGGCGCTCTTCCATCCAGACGGATGGGAACATAGCCAAGCAGCCAGGAGACACATTGA
CTTGTGACCACTGGGAAGGATGCCTAGCCAGAAAAGTCCCAGCAGCTGGGTCTGTTAATCTTTTCTGAATGAACCAGCA
GGCAGTTGACCTCTCTAAACCTGTCCTGGATTCCTTTATATCTTTGTAGTCACCTTTTTACCCCCTCAAGAATTCCCCT
ATAAAGTTGTTCTTAATAAGACTCTTTTTGCCCACTTCCCCCTGACCTTCTGAGTTGAATATGAATTTCACTAATTGGT
GAAAGAAACCACCATGACCTTGATAAAGCCATTTCTACTCTGGTTCCTCCCTTCTAAGAATTTGTTCATTCAAGCAAGT
ATTTGAGTCTAAATGGATCCACTTGGACATTTTAATAATTATCATGAACCTCAGTATCCTTAAAGTGTGGCTAAAACAG
GCTCAAAAAATTCAGATAGTGTAATCTACTTTCTCTCTCCCTCCTCCAGATTTAAGTGGATTAATTCACTTCACTATGC
CAGCACCTGAGTACAGAATAATTTATTTCTGTGTCGTTTCATGATGAAAGTCCAGCTGGCATTAGCTCAAATTATGCAG
CTGGCTATTAATTGAAGAAAACTTCCCTGTCACTCCTCAGTCAAACATGATCTGATTCAGCAGATCCTTTTCACTCTCA
TCTCTTCTATTCTACCAGTAGAATAAATGTAAATAACTTTCACTTGGCTCTGCTTGTCATGGATTGTAAATTACCTGGC
AGCATGCAGACTGACCACATTACTGTTTTGGAGGCGGCTTGTTTCAGTTGATTAGTATTTCTAGAAGAGTTTTGCACAT
TTCATCTCTGAGGCCTGAATGATGTCCACTAGCAGGAAATATTGTAGTCTGCCTTTTTTCTTACATACTGTATACTAAA
TTTCAATCTAATTTCAACAAGATGTCAAATTCTAGCACCTGTAGGGCAGGTGTTGGTCTTCTATGAATTGATTATATGT
TTTTCTATCATACTGGATGGTGTACAAGCCCAGGTTGTATTTTAAATAGAATTTCAAGAGAGAGATTTGTTCTGGAATT
TAGAAATATATATTATGTGCCAAAATTATTTGATGAGTGCATTTTGTAATTCTTAAAATACAAAACTACTTGGCATGAA
GAGATGCTATAGTATGTTAACAATTGTGGAACTTTTTCATAAGATGAAATTCTGTGCAGAAATGAGGGAGCAGAATTCT
TGTGGGAGTGCTAAAATGGTTCATCAATTTGATCCTCACAGCATATGAGAATTCACCAATTATATTACTCTCTGAAAAT
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GCTGCATGACCAGTCATTATTATACGCTCAGCCCTGAAAATGAACTTAAGATGGTAAAATCATACCTTGCCAGGATTTG
GGTGGCTGTGAGGGATTCAGTAGGATTTTAGCAACAGGGACTGGAAAAGAAATCAGAACTTGGCAGAGAAAAAAATAGC
ACTAGGATACTAGAAGAGACCTGGGAGAACTAGCTTGACCTTAGAGGCTGGTCTTGTGAGTCATTTGAGAAATAGTATC
AAAAGGGCATAAGAGGGCCCGGCATAGATTAGGCTATTTGGGGTTACAGGAGATCCAAAGCTAGAAGGGGCAACAAAAC
ATTGTGGTATGAGGCCATCCTAATTTGAACATCAGGCACAGGATCTAGTGTCCATGAAGTAGATCTCAGGGAATGGGCA
GCCTGAGAAGAAGAGTAGATCATGCAGAAGCCAGCAGTCACCCCTAGATCCAGATCTGAGTGTCATGACCTAGATGCAA
TTAAAATCCTTATAATGGGTCCCACCCTGGCAGGATTCTTTCAGGAACTCAGGCTGAGCCTGAAGTGAGTAGATTCAGC
TGAAGGGAAGGTAAAGAACTATAAGTTGATAGACTTGCAAAATGGAGAGGCTGCTTTTAGGAAACCATTGATAATAGTA
TCAATCCCATTGATAATATATGTGATTGCCCTTTTATAAGGCCATGTGCTTTCTGCACAATTATGATAAAGTATTTAGC
CAAACTTGTATTCCCTATATAAAGGGGGAGGAGATAGTATCCCATGGGGAATTCCTTCCCATATTATAAACTGGTAGAC
AACTTAAGCAAAAATGTTTTTACTCATATGAACACTGTTGAAGTATAAAGCCAGGTATTTAAGTCATGATAGGTGTTTA

Fig. 9.226

TTTACTTTGAACATTTGCCAGAAGTTTGATGATGGGTATATTTGTAGACTGGGTGTTAGAGGTTGTTATATTCTAAAAA
GATATCTTCTGATTAATTTTCTTCATTTATAAAAACAATCTATTTTGATAACATTTAATTTATGAACTTTGGTGTCATG
TTACACTTTATACATTTTGGTTGTACATTCCCTGTAATGCTTACAGAGACAGCCAGTCAGGCAATAATTGCTACATACT
GAGCGCCTTCTATTTTCTGAGTACTATTGTAAATTATAGAGATAAAGCAGTGAACCAGACAGAGTCTCCATCCTAAAAG
AGCCTAGTAGAGGATGGGAACTGATGTAGTATCTTGTAATTGTCACAGCATGGTACACTTGCTTCTTCAGATGCCATTA
TTAAGGGCGTCGTTTCTTTAAATTCTGAGATCCCTAACTCAGCTTATGCCAGAACTGATGAGAATTAGACCTTCCTAAG
GTCTTCTTTCTTCCTAAAATGAATATTGAAATAAATCTATAAGATAAAAATAATCCTACCACCAAGCCCCAATTAAGAC
TGGATTTTTAACTTGCTCTTCTCAGCACAATGACACAACAGAGGACACAGAGGTTAATGGAATGTCTTTGGAGCAAAGG
AGATTTCAAAACCACCAGTTTGTTAGATTTGATGATCAGCTCTGCAAAATGTTTAAAGAAGATTTCTTACTCATATCTT
ATAAGTTAAGACTATAAATGGTTTAAATGGGGGAGGATGTGACAGGATTGAAAATCTTCCCCTTCCTTTGTGGCTATGA
GAATTCACACTGAGCAACAGGGAAGAGAAGGAACTAGAACTTGGAATGAGCCTGTGTGTGGGCCCTCATTGTTCCAGGA
TTTACAAAGGGCTACGCTGTCATCATATTAAATAAATGGCTCCTGCTCCTTGTGCCAGCTTAATTGCCACCTTGGCTCC
CGAACAAAGAAATCACAATTGAGGCAAAACATGTTTTGCTATTGAAGGCAAAACCTCCTTAGAGCAATTTTGGGGTTGT
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AATGATGTACACTTGTGCTGTTAAGTTTCAGCATGGAATACAGGCTTTATGTATTTAGGCAGTAATGCTGAGTTAGATA
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CTAAATGTGCTTCCCTACTGTTAGTTACACGTATAAGTCACATCTCAAAGCGTGTTCCCCAGGTTAGCATCAATATCAC
CTAGGAACTTGCTGGAGATGCAAATTATCTGGTTCCATCTCAGGCCTAATGAATCAGAAACTCTAGGTGGAAGGGAGCA
GTCCAGCAACCTGCATTTTACAAAGACCTCCAGGACACTCTGATGTATGCTAGAGTCTGAGATCCACTGGTGCAAAGAA
TACCATAGGACAGATGTACACTAACTAAACTAGTTCTGTTTCTCTTAAAATGACTTTGACAATATTTAGAATTTTGAAG
AATGGTATAGAAATTCATAGTTCGTGTGTGTGTGTTTGTGTATGTATGTGTCTGTGTGTGTGTGTTTAGCAGAATTCT
ATTTTAGAAAATATGGGTAGACTTTTATTTAGTTTTGTTATTTTTGTTATTTTTGAAAAATTAAGAGGTAAGCAGAGA
AGTATAGCCAGCTACTTCCATAATTTTGTAGGAATAATGAAGTTTATTCTAGCAGAAAGTTATATCTTATGGAATAACT
TCTCTAATATTCTCTCTAGACATATATTCTTTTTTGAGGCAGGAACACAAAAGAAAATTGGCTTCTTCATCAAGTTCAA
AGAAATGGTGTTTTAATTATGTAGAGAAGTAATTTCATTTTCTCAGAGAAATGGGTAGACAGATATTAGTAATTTAACT
CTCTTCTTAAGTAATGGCTGCTATAGCTCTTACCAACACTGAAAGAAGTAGAGTCAAATAGATTTAAATCTGGCTAGTG
ATTAGAATTTTTTGGGGGGTAGGGTGGGTGAAACTGTATTGCAGGGAGGTACGTTGTAATAAGACAGCTAGTTATTATG
CACTACCCTCCAGTTCTTTGACATGATAGCTAAGGGCATAGACAAAAATCTGAACTCTGTGGTCTTTGTACATATCTGC
ATTCAGATTAATTCACTTAACAAATATTTGTGGAGCACCTACCATGGGCTTATCACTATAATGGGCTAAGGTTGTACAG
TGAGCAAGATACTCACATATGTGATTCTTGTGAAGCCAGAGGTCCAGTGGTAAAGCTAGATGAGTAAACATCAATTACA
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GCAGGCAGAGACAAGAGCATATGCAAAGTTGGAAAGTGGAGAGTTCTTGACATTACCACATTACTGAATGTGCATATGG
TGGAGTTTAGGGTGCAGAGAGGACAGTTGCACATGCTCTGGAGAATGATGGGAGATGAAGCTGAGAATAATACAAGGAA
GAGAAAATAACAGGCCTTGCTATCCATGTTAAGAATTCCGGACTTCATTCCAACAAAAGGGAAAGTCTTTGAGGTTGTA
GTATTTGGCTGTGCTGTAGAGAGTGTATTGGGGAAGGACAGTGCTGAAGGAAAGGAGACCAGCTGGGACATTGCTGCAA
TAATTCAGACCGGTACTCATGGCTTGGACCAGCAGCAAGGGGAGAATGAAAAGTAAAGAGATTTAGGAAATAGCTACTT
AGGAAATAGATTGAACGGGAACTGGCATTCAATATGTGTGACAGCGAGGAACAGGAAGACACTTGGGACAACTAGAAGA
ACAGTAGGCCATTCACTGAGTTTGGGGTCCAGCAAGAGGAGTGAGTTTGAGGGTGAAATTATGTGTTCCATTTGGGCTA
GTAGGGTCTGAGAAGTCTGTGGTTGTCCAAGTAGAGATGTCCAATAAACTGTGGAAAATGCAATCCCTTAGGCCTCTTT
ATTCTCATAAATACTTCTCATGCTTTTTCACAGCAGAGGCTAAAGCCAAAAAACTTTTACAGTTGTTGATTACTCCCAT
AGTGATTGGGCCACTACTCTCGATGTCAGTTTTAAGTGTTATGTGAATTTTAGCGTTGCAGAATTTTAGCATTGCAGAA
TTTTTCTGCACAAAATCCTAGAAAGCAACTTAGTTTACTCAGTGAAACCTGCCTGCCAACTAACAAGACCTATTATTTT
TCAGTTGGGATTTTACTTCAACAGTGGAAACTATGACACAACAGGGATGGTCTAACCCCAATTTGAGCACTCTGTTCTC
ATTTTCATTAGGAATCACTTCCCTGTAATCATAAAATGGAAATATATTTACTGTAGACATGTTGTTTGGTGAAAGCAAC
ACTAAAAATGAGTAGATGAATATAACAGCTACAGGATAAAATAAGAGTTCCCATTTTTAAAAAGAAGGACTATGTTTAC
AACACAGCTCTCCTTAATGTTATAGTGTTATTATAGCAGTGAATTTTCAAATAAAATATTTAAATTGGAATGTTAGAAG
TTTTCTTCTATCATATCAAATAAGTGGAAGGCCACCTGTTTGATGATTACATATTCAAGTGATAGTTCTCAAAAACTAA
AGAAAAATCTCATATAAATTATAAATGATTCTGCAAAGTTTCACCTAACATTTTCTCCATACTTATGAAGCTTCTGAAG
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AGCAAGGATAGTCATCAACACAATTAAGAATGRCCAAATCCTATTAATGTTTTCAAATTACCAAATTAGAAAAGTTAGG
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TCATGTGACATACCATATGTAAACATTTTCCTAATTAATAACTGGAAAGCTTCTATGTGAAATACAAACTTTCTGCTCA
TACATAATGTAGACTACAGGCAGACAGTTAAGAGTTGGTCAAAGCTGTCAAAGCTTGTTTTATGGAAATCTCATCTTCT
TTTCCTGTGCTCTTTATCCTAGTCCAGGTCCTCTGAATTCTTTTACTCTACAGTACTTAGCTAATACAGTGTTTATCCT
CACATTCTATCATAGCTTTTATATTAACCACTCAGCAAAATATGTGTGCATGCACATACACGCACAACCATACCTATAT
TTAATCATCTAGTAAACTATATTAAATCTTCTGTAAACTTCAGATAAGCCTGTTTAAATTGGGGGTGGGTCGTATTGTA
GCATACCAAATGGTTCATATACCAAGTATATATTTGTCATACTATGTGGAACAGTATTATATTTAAAACTGAAGTCTTA
TTTCATGTAGGTTGTACCAAATTTGTGGTGGTAAACATTGTATTTAGGTCATTCACAAAGAGTACAGAAATACAGATTA
GCCATATTTTTCTATAGTGCCATTCAGTGTAATAGGTACACAATACATCTCATATTAAAGAAAAAAGAGTCTTTTCAAA
AGCCTGTAAGGGTCTGAATAAAGGTCTTAGAAATGTGTCATAACAGCTGAAATCTAAGAGATTTGGAAAAAGTGGGAGA

Fig. 9.227

AGTTAAATATTGCAAATGCATAGAGCTAAGACTTCTTCATTGAAAGTTGGGTAGTTCCAACATTCATGTGGAAAATCTT
TAAAAGTAGCCAAAAGGTAATTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGAGGCTGAGTCTTGCTCTGTTGCCCAG
GCTGGAGTGCAGTGGCATGATCTCGGCTCACTGCAAGCTCYGCCTCCCGGGTTCACGCCATTCTCTTGCCTCAGCCTCC
CGAGTAGCTGGGACTACAGGTGCCTGCCACCACGCCTGGCTAATTTTTTGTATTTTTAGTAGAGACAGGGTTTCATCGT
GTTAGCCAGGATGGTCTCAATCTCCTGACCTTGTGATTCACCCATCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTG
AGCCACCATGCCTGGCCCAAAAGCTAATTTTTTAAATTTTCCAGATAGAACTTCATGTGTATTTGATATATTCCATTTT
CGTGTATCCAATATTACCAAATCCATGGTATTTTTATTCTTTGTTTTAGATATTCTAATCATTTCACAGCACTTTCATT
ACACATCTGCCCAGATTTCCTGTTGCTAAATTTCAGACACTATTCTTTAAGTCTTGGAAGAGATCAACTTTTTCAGCAC
AACCCATCCCAAACAATGTAATGTTACTGTGCTATATTAAGACAACACATGTGCTGATCTTTTTCAGGCATTTCCAGAA
TTTTTATTGAATGTCAAGTATGTGCAAGGCAAAGTCCATCTAGCGATTTTAGGATTTCCAGGACCTGCCATTTATAAAC
TTCCTGGAAGAAAAATTAACCCCCTCAAAATGGGTGTTGACATCCAGTTTGCCTTTATAGCTCCTCTGATGCCTTTTAA
AAACTATATTTACCCATCTTATGTCAATAAAAAGGATGTATTTATTATAAGTTGTGGCAGATAGTGTTTTATAGACAAT
TTTATAGCCCACGTGTTAAAGGTAAAAGCAAAGAAATTATGCTACTTTGCTGTATTTTCCCAGTGATTTATGTAAGTAT
TTATTCCCTGTAGGAAAAAGTTGAAACACTATTGTTGACAACAGGGCCCAAATAGGTATCAGCTTGATGTACTTTATCA
CATATTATCTTTTTGTTTTTGCATCATCCCTAGGAGGTAAATATGTAACACTTTGGTTTCATTAGCATCACAACAGATT
ATTAGGCAAATCAACAGAATGAAATTAAAGTTATATTATCTAATTGAAAAAAGCCTTCACTTATATTTTCAAGCATTAG
TTCTTATCCACTTTCAATCACCTGGGGAACTTTAAAAAATCTGATGCCTGGGCCAGACACCCAGAAAAATGACATCAGA
CTTTCTGGGGACAGGACCCAGGTGACTGTATTTTTCTAAATGTCTTTCATGACTCCGCTGCTTTAGAGGTTCACAGACT
TCCACTTAAAGAACTGCTGGTTAAGAAATGCATCCCTACTTGCTCGGACTCCCAGGGATATCACTTTTCACCTGTTCCT
ATCATTTAGAAAAAAATGATTTGAATCAGCTAGATACATGATAGAGGACCCCCCCCCCACACACACACACACACACCAATC
TAAGCACAAAATTATCTTGTTGTCCTCAATAGTTTGCATGGATAAGTAATGCAGAATAAGCATCATACCCAATATTAAT
AAATACTTAACAAGAAGCCCAAGATTTTACCTTGTTTCCTATTTTTTCCTTCAGCCATCACATTCAAACCTGGCCCAAA
GGTTTCTCACATTCTGGCCTCCATCACCACCACTACTGCTTTGGCCTGGCCTTTTGTCAAGCTAGAAATTGCCAGAATT
TCCTGACAACAGGCTCTGTAAGATTCAGTTTAGAGCTTACACTTTGGCTGGAGTTCATCTTCCTAAAAAGAGACTGTGA
TATGTAAATCCACAACCTGAAATCTCATTGGCTCTCCATTGCCTACCAATAACCCAAAATCCTCTACTCAGGAAGTCCT
GGATGGTGTAACTCCATTGCACACAGGTTCATCCCACAAGGCCTCTTGGTAATGGGGTACTTTCATGTGCATACTATTC
TGCTGCTCTTGTGGAAAGAGTCTTCAACCCCATTCTGTATACCCTGGACACTCACCTGAGACCCAGCTGAAACAGACCT
TGTCATCTCGGACCCTGCCCTTGGTTCTGTTGAAAGAATTAGCCACCAGATCCTTGAGGCTGTCTCAGGACTTTTGCTT
CACCTTTATTATAACAATTGGAATGCAGGCAAAATAGTGTTTCCAGTTACTAAAATAAAACTATAGACCATACAATATG
TTTGTTTTGTGCTTATTTAACTCGCAGGGGAAAATACCCATATTTTTAAGACTCTGGATTTAAAAAATCTGGTTGATTA
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CTCTGGAAAATATGTCTAAAATGCAAGAGAAAATTCCAAGAAAATAAGCTAGATTTCAATTAACATGTGAAAAGCATTT
CTTAATATATACAATGTTTATTTTACATGGATAATTTATGTAAGTTATTGAATAAATAATACTTTTAGGTTTGGGTTTT
AGGGGAGGTTTTAGGTTTGGGTTGCAGCAGAGGCTTTTTCAGCTGATTCAAATATCTAGTTTTCAAAATACTCTGCCCA
CATGATTTTTAGATATGACTTAGCCTTAATTGCTGACTCAGATTTTCACCTTTTAAAAAGCAATTGTGCTTTTTCATAT
ACACTATCAAACAAGATTATAAGATATTTTAAGGTAAGAAAGTAAAAGGGCATCCACTAATGATCATCAGAATCACCTG
GAAGGGCCAATAAGCCACACATTACCAGGCCCCTTCCCCAAAATTTCTAATTCTGTAGATCTGTGGTACAGCCTCCAAT
TTTTTGCTTCTAATAAGACCCCAAGTGACACTAATGCTGCTAGTCTGGAGACCACACTTTGAGAATCACTGCATTAAAT
TAACAATTTTATTGGTTGAGTTTTCACCACAGTGTGCATATCTGTTGACTAACAATGAATAGCTTTGTTGTCGCCAAAC
ACTGTAATGTTTCCAAATATCCATATGTAGTCACAGGCCCAGAGAAACAAACCACATCTATATTAAGACTGTTTTGTTG
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TTTAATAACATGTAGCTGAGAATGATAAACTCTAGGCAGCAGGGTGGCTTGGAGATACTAATGGAAATGCCCAGTCAAA
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TGCTACACTCAGTCTAGGGCAATGACCCTGAGGAATGGTATGTTTGGCAAAAAAGAAACCAAAGAAGGCTACTGCCATG
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TGGCTGATATTTTGAGCTCAAAGAAACTTAAATTTTTAGGTAAGGATACTAAGACCGACTTAAAAAGTATAGTATCAAT
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GGTCAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAAAACCCATCTCTACTAAAAATACAGAAATTAGCTGGGCATGG
TGGTGGCAGGTGCCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATGGCTTGAACCCAGGAGGCAGAGGTTAC
AGTGTGCTGAGATAACGCCACGGCACTCTAGCCTGGGTGAGAGTGATATTCCATCTCAAAAATCAAAACAAAAAAAATCT
AGTAAGGGTCTATGTCTAGCGCCTGCACTTCAAATATGTGTTTGTCATGACATCATTAGCCCAATCCAATTTTCTTTCA
TTAATTTTCTGAAATAAATATTTTTTGAGTTTATACTATATACCAGGTGCTGCTGTAAGTGCTAGGAATATAACAGTGA
ATCAAACAAATAAAAAATCTGTGACCTTTTGGAGCTTACATTCCAATGAATATAGGCAAAATAATAGCCCCTGCAAAGAG
CTCCACTGCCTAATCCCTGGACTAAATGAACATTACCTCACATGCAAAAAAAGATTTTGCAGATTTGATTAGGGGCACA

Fig. 9.228

GACCTTGAGATGTAGTGTCCGTATTAGCCCAGTGGGCCCAATCTAATCACACAAGTCCTTCTAAGCAAAGACTTTTCCC
TGGTTAGGTTAGAGAGAGATGTGATAACAGAAAAAGGGTCAGACAGATGCAACTTTGTTGGCTTTGGAAATGAAAGAAG
GGGGCCTGGAGCCAAGGAATGTGGACAGCTAGAAAGGGCAAGGAAGCAGATTCTCCCTTAGCCCACTCAGAAAGGAATG
CAACCCTGAAGACACCTTGATTTTAGCCCATTGAGGCCTGTGTTGGACTTCTGACCTACAGAACTATAAAATGATACAT
TTTAATTGTTAAATCACTAAGTTTCTGATAATTTGTTACACCAGCAGCAGAAAACTACAGAAAAGATAGACAATATTCA
AGAAAAATAAGTAAAAAATATATGTTGGATAGTGATAAGTGCTAAGGAAAAAAGTCAGGGAATGACATAGGAAGTTATC
AGTAGGGATGCAATTTTGAATAGGGTAGCCCTCCAGGTTAACATTTGCATAGACTCAAAGGAGATGAAGGGCAAGAACA
TTTCAGATGAAGGAAACAGGAGGCTAAAAGCTGAGACTAGGACAATGATCAGCCTGACTAGATTCTGAATATCACCATT
AAAAGAGCAGTTTCTACTTCAGAATATATGTACAAGCTTCACCTGGAACCATGTGTGATGATTTAGGATGAAGTTTCA
AAACTCCACAGATGACATTCTTATTTTTCTATAAGCAAACAGTCTTGCCCAAATAACATCATTTACTTTTTCATGTTTG
CTGGAGAGTTCATTAAGAAATTCAATACACCGTATTCAAAGAAGATGAATTCTTACAATCACTTAGAATTTGGTCTAAG
GCAAACAATTGAGGATGTTCAGACTGAGTCTTTTTGGACCATCTACTCAACATCATTATCAACCAACAGCTTATACCCC
TTCAAAGGGATCTCAAATTATATTTGATCCTGAGTTGTTGCTATAATAAATTTAGAGCTGGAGAAAAATAGTCATTGTA
ATTATTTTGTTATTAGAGACCGGCTTACATATGCTAAATAAATAAAAACAAAATGAGAGTTAATTCTATGTGAAATTCA
CCATCAATTTTGATGAAATTTCCTATTGATACTTCCAAGTACAGTAGGCCTTTCGTATCCATGGGTTCCACATCTGTGT
ATTCAATCCAATTTTTTTTTTTAATAATATGGTTGTGTATATACTGAACATGTACAGACTTTTCTTGTCATTCCCTAAA
CAGTACAGCATAATAACTATTGACATAACATTTACATTGTATTAGGTATAAGTAATCTGGAGATGCTTTAAAGTATATT
GATGTGTGTAGGTTATATACAAATACTATGTCATTTTATATAAGGAACTTGAGCATCCATGGATTTTGGTATCTGCCTG
AAGACCTGGAACCAATCCCCAAAGATCCTGAGGGACCACTGTAATCTAATTGAGGCCAAGTTTCATGGGTTTGTATCCT
CTTAAGTACCTGGGGGAAAAAACTGTCTGATTTTTTTTAAGTTTTAGTATACCATATATTTTAATTTTCAAAGAAAGG
AAAACAGAAATTTTATGATCTGTGTCAATAGAAGTGTTAATATATAAAGCAAAGAAATGCCTAGGTGAATATTGGCCTA
GTAATAAACATTCTGCAATGGTGCTTCATGGGAAATACGCCTTACCTTGCTACTCAAAATGTGATCCATGAACCAGCAG
TATGAATATCACCTGGACTTGGTAGAAATTCTTGGACCCCACCCTGACCTAGTGGGTAACCATCTGCATTGCAGTAAGA
TCCCAGGTGATTCATATGTGTTTTCAATGTGAGAAGCACAGCACTGGGGCCTTACCCGGGGCCCTCCTTAGGAAACACA
CCAAGTATTGCATGTTTTTTACATCCTGACAGGTCCATATGAACTCACATTTTTCCGAATACAGTGCACTAGCATATCT
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GTTATGCTTTTGAGAATTTATCAAACCTTTTGGTCATATAATGTTTTTATTTCAAAACCTTAAATTGGTCAACATATTT
TTAAATATTTAATAGTTGAGGGATGAAGAGGATAGAAGTTTAATTAGTTCAAAGGAAGGTAAATTGGGAAGGAAACAAA
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GACTCTTCAAAGGTCAATGCTTGTGCCCCTATTGCTGCACATCCTTCTCCTTGTCAGTGTTGATGTGTCATTGGCTGGC
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AAGAGTGAGTTTTAGGAGTGAGTCTGAAATTAGAATAGACATTTGCTGATCTTGCATAGGTCCAACGAATTAAGGCAAG
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CAACCGTTCAGCTTGCATCTGCCAGCCTTCCAGAGATATGTCATATTTGGCTGAGTCGAGGGTCAAGGGCAGAGTGGCC
AGGTGCGATGGAGTAAACTTTGGGAATGACATTTTGGTGACCCAGCACACAACTGCCTGAAATTCCATTTTCATGTGAC
ACTTTTGTATCTGTAACCATCAGGTCTGTTCCCTATGTTTTCTATTCCTTAACTTGGCTACCATTATACCATCACATCT
CTTTCCTTTTCTAGTGACTCCCCATTAGACTAGCTCCTATCTCATAACCTCCTTTTGTAATTTAATGGCCCAAAGATTA
GCAAATTCCAGAAATTCCTAAAGTAATCCAATTAGCTCAGAACATCATAGAGACTTTTTTTTTCTTTGCCTCATCCTG
GGGTTATTTATCAATGAAAGTGACTTTAGATTAGATAGACACTGGCTGCCACATCGTATCGTTGTGACATCCTGCACTT
AACTAAAAGGGCTTGACTTAGGCACCATCTCCTTCTCTCTTGGCAGCTGCTCAGTTAGATGTTTTTGTTTTAACCAAAG
GGCAGGACTTCAAATGTGACCCTATTTAACTCCATCTGGTTATATTTTGACCTTATGCTCTTTTTATATCCTGATTCTG
TCATCCATTCTCTTAGCTGTCCTTCCCAGCTTGATGTAATAGTATTTTCCCAAACTACACCCTTTTCCATAATAAAGAT
TGTCACTCCTCCCTCAAGCTTCCTTAAGCAAGCTTTATCATATGTCTGATAGGATCTCTGTTTCTGATTGTACTCAGTA
TAGATTTGTTTCCTGGCACACATGTATGCACTATGTCACTTAATCACAGTGCCCCTATTAGATTACAAACTCCTGTCAC
CAAGGGTTTTGTTCCCTCTTTTCAAAGCAGAACTTAAAAGAATTTTGCTTACCTTTAAGCGTGCAGTTCACATCATTGA
CTTTAACTGGATGGTGGTTGATGGCTGATGGTCAACTAACAAAAAAGGAGTTGAGGAGTTGAGGTTTCAGATATAACAG
AAGGATACTTAAGACTTTTAAGGAATAAAAAACTAATTTTTCTTAGCACAATGGTTCAGATGAAAGTAAGGGTGCATCA
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TTAATTAAATATCTGAGACAGCAGAATTAAAAGAGAAGAAAGTGATATACAATTTGGAAGGTTTGGAAAGCTGGCCATA
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TTACTTTGCAGTGAAGGCTTGAAATATTTGAAAGTTCACTTTATTGCAATAGGATTAAGTACATCAAACTTCATCCATT
CTTATCTCTCTCAAATATTAGGAGTATAACTTTCAACTGAACTTCTTTGCCTGCTGTAATATACTGTTCTATAGTGATA
TTTTAAAATGAATACTTTGTGAACATAGTACTAGAAAAAGGATAGTGTTTTGAATATTTTAATAGCCTTACAGGGTTAA
AAAAGGATCTTATAAAAAGTATGTTTAGTACCATTCAATTTTTACAAATTTATGCATTTGCTTATTCATATATGTAAAT
TTAAAATTTACATATAAGCTTATACTCAGAAAAAGATAAATGTTGTAAACACACTTGCATGCACACACACACCATAACA
ACCACCATGCCATTCAGTGGTTATTTCAGGGTAAGTAGGATTGCAGAAACTTTTACATATTCACGTTTTGCCTATATTT
TCTGTTATAAGCTTTTATTTTGGCATGAGAAGAAAAAAATTTTAAAATTTCCCAAAAACATTCTTTGTAATAGTCAAAA

Fig. 9.229

ATTAAAATGAACAGTGTCTATCAATAGGAGAATGGCTACACCAACAAAAAAAGTCAAGTAAGAAATAAAATTGGCCAGG
CCTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCCAAGGCTGGTGGATTGCTTGAGCCCAGGAGTTTGAGACC
AGCCTGGGCAATATGGCAAAACACCATATGTACAAAAAATACAAAAAAAATAGCCAAGCATGGTGGCATGCACATGTAG
TCCTAGCTACTAGGGTGGCTGAGGTGGGAGGATTGCTTGAGCCTGAGAGGCAGAGGTTGCTGTGAGCCGAGATCACGCC
ACTGCATTCTAGCCAGGGAGATAGAACAAGACCCTGTCTCAAAAAAATAAAATTAAGCAATGGGAAAAGATTCCTCTTG
CTATTTTAAATGTTGATCAACATTCAAATTTTCAGTGGTTTTAGGTAACAAGACATGTCAACCTCCTGAAACAGTAATT
GTTGTAGATAATAAGAATATATATGAGTTTGGCTTTACCTGATTTTAAAAGTGGAGAGAAAAGCTGAATTGAAGCAAGC
ATACAATTATTTTCTAAACATATCCTCTCCAGTTTCAGTGTTTTTAATCAAACCACCAGGAATGGTGCAGCAGACAAT
GCCAGTCCATGTCTCCCCCTTCATGGTCCCTTAGTTGTCATTAATGGGTGACTGCAGAGAACCATAGGCATTTGAGGAC
TTAACAGAGATATGTTTTATATTGAGAGTGGACATAAGCTCCTCATTGCCTCATTGTGGTTTGCACTTCAAACTGCAGC
GTGTACTTTTTCTAAGCTCTGTGGTCTGCCTTCCTAGGACTGCTTGCCCTGTACTGTTATTTCAGAATGTTTATCTAGT
GAGGAGTGCTGCATTGCTCCATTGTGCATCACAGGGCACAGGAAGCAATGGTATGACATTTTTGCTGCACATCTATTTT
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AAGCCCCTTATAGAACTATCAGATCTCCTGAGAAGTCACTCACTATCATGAGAACAGCAGGGGGATCTGCTCCCATGAT
CTAATCACCTCCCATGAGGTTCCCTCCCCCAAAACATGGGGATTACAATTTGGATTACAATTCGAGATTTGGGTGAGGA
CACAGAGCCAGACCATATCATTCCACCTTTTGCCCTCCAAAATCTCATCTTTCTCACATTTCAAAACACAATTATGCCT
TCCCAAGAGTCTCCCAAAGTCTTGACTCATTTCAGCGTTAACTCAATAGTCCAAGTCCAAAGTCTCGACTGAGACAAGG
CAAGTCCCTTCTGTCTATGAGCCTGTAAAAGCAAAAGCAAGTTAATTACTTCCTAGATACAGTGGAGGCACAGGTATTG
GGTAAATACACTCATTCCAAATGGGAGAAATTGTCCAGAACAAAGGGGCAACAGGCCCCATGCAAGTCCAAAATCCAAT
AGGGCAGTCATTAAACATTAAAGTTCCAAAATGATCTCCTTTGACTCCATGTCTTACATCCAGTTCATGCTGTTGCAAG
AGTTGGGTCCCCACCACTTTGGCAGCTCCACCCCTGTGGTTTTTCAGGGTACAGTCCCCTCCTGGCTGCTTTCATGGGC
TGGCATTGAGTGTCTGCAGCTTTTCCAGGTGCGCAGTGCAAGCTGTTGGTGGAGCTACCATTCTGGGGTCTGGAGGATG
GTTGCCCTCTTCTCACAGCTCCACTATGCAGTGCCCCAGTGGGAATTCTGTGTGGGAGCTTGCACCCCACATTTTCCTA
CTGCACTGCCCCAGCAGAGGTTCTCCACGAGGGCCCCGTCCCTGCAGCAGGCTCTTGCCTGGACATCCAGGCATTTCCA
TACATCCTCTGAAATCTAGGTGGAGGTTCCCAAACCTCAGTTCTTGACTTCTGTGCACCTGCAGGCCCAACACCACGTG
TAAGCTGCTAAGCCTTGAGGCTTGGACCTTCTGAAGCAATGGCCTGAGCTGTATGTTGGCCCCTTTTAGCCATGGTTGG
GACTGAAGCAGCTGGGATGCAGGGTTGCACAGAGCAGGGGGACCCTAGGCCCACCCCACAAAATAAAGTCTTTCCTCCT
AGGCCTCCAGGCCTGTAATAGGAGGGGCTGCTGTGAAGTCGTCTAACAGGCTCTAGAGACATTTTCCTCATTGTCTTGG
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AGCAAGAGTGACCTTTACTCCAGTTTCTAACAAGTTCCTCATCTCCATCTCAGACCAACTCAGCCTGGACGTCATTGTT
CGTATCACTATAAGCATTTTGGTCAAAGCCATTCAACAAGTTTCTCAGACGTCCCAAACTTTCCCACATCTTTCTGTCT
TCTGAGCCCTCCAAGTCTCTAGGAAGTTGCACATTTTCCCACATTTTCCTGTCTTCTTCTGAGGCCTCCAAACTGTTCC
AACCTCTGCCTGTTACCCAGTTCCAAAGTCGCTTCCACATTTTCAGGTATCTGCAGTAGTGCCACACTACTCTCAGTAC
CAACTGACTGTACTAATCTGTTCTCACACTGCTATAAAGAACTGCCTGAGACTGGGTAATTTGTAAAGGAAACGGGTTT
AATTGACTTACAGTTCCACATGACTGGGGAGGCTTCAGGAAACTTACAAACATGGTGGAAGGGGAAGCAAACATGTTCT
TCTTCACATGGCAGCAGGAGAGAGAAGTGCAGAGTGGAGGGGAAAAAGCCCCTTATAAAACCATTAGAGCTCCAGAGAA
GTCACTCACTATTATTAGAACAGCATGGGGGAATCTGTTCCATGATCTAATCACCTCCCATGAGGACTTTCCCCCAAAA
CGTGGGGATTACAATTTGCATTACAATTCAAGTTGAGATTTGGTTGAGGACACAGAACCAGACCATATCAAAGAGTTTG
CTTTGACAAAAGGAAGTGTATCTTTTTATTTACTTATTTACAAAGCAGCTTATTAAAGTTATTAAATAGTTTTCAAAGG
GGCAGCTTTTTTTTCTACTTTCTGTATTAGTAAGCAACCATCTATGATTGTAATACAACTGAGGTCTCCCAAGAGAGAA
TGTAGCACAAAACAAGGTGTGCTATCTAAACCTGTAAGAAATGTTGTGCAGTGAACCAACTCCAGCACAGATATGGAGC
TCTCTCAGAAACAACATAGGAAATTTAGATATGTGAAATTCAAATAGAAATAGAAAACTCAATTTAGAGTTTAGTTTGC
GTAATATCTTAGAAATGTTTTCATGGTTCAAAGCTGATATTTGACAATTGTGTTAGATCTATAAAAATTCACAAAACAT
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GTACCTTCATTTACATCCTTTCAGTTGAGGAAGGGTGGGTGTTTGAGAGCAAAATGTATGTATAAGGTAAGAAGAAAAG
AGAAATGAGAGAGAGAAGCAGAAGATAGTGAGCCATCAATAATGATATTAGTTGGCATTCATTTCAAAAGCCAACCACC
CCAATTTAGAGGATTTGCATTTAGGACTAATTAAATTATAAGCTAATTGAGCAGGGACTGAGTTAAGCCTACTGATAGT
GCTTCATAAATATTCATATTAACAATAATACAAGATGTTCCTTTTCAAGGCTAAAAACTTTTTCTAAATGGTGTATACA
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GACATTTCAGAGTCACATTCTGTATATCATTCATGTGAAATGGCATAGGCAATTTTACTCCTCAAGATTCTTTGCCCAG
AATTCGCAATTTAATAAGAACAAGTATTATGAATTGTTGAAGATTCTTCCAGCTCTCTTGGAAATAAAGGGTCTTCTCA
AATTGTAGCTTTGGTACATTAATAGTTACTCTGGGGGCCTAAATGAGTTAGTTAATGTGCAGCTTAAACATCTGAGGCA
CACCCAGAAGTAACTCAGGACTGAGGAATTCACCTTCCCTTGCTACTCAATTGCCGTTTGTGTAAAATAGTGGACAGTG
ACACTGTTTGTGTGCAGCTAGCAACTGTCTCTAAGTCTTGGGTTTGTTGGAGCATAAAGTGCACTCCAGTGCCCTGAGT
ATACCTGTAAGGGTATTTACCATGATTCATAAGACTTGTTTTAAAATTCCTCTCCAAATAAACACCCTCTTAAATTTAA
TTTTCCTCATATTTCTATGTGGTTATTTATAGTTCAAGAACAAGTATTTAAAATATTTAAATGATAGCCATTCAATTAA

Fig. 9.230

CTATTCCAAATTTAGTTTTTTTCACCAAGGAGCTGAGCTGATTATCAAATATGCTTTATGTGAACTCTGTTTTGTTTA
AAGTGTACTGTATTTTTTAAATTTGTGAACATGGGAAATTATACAATGTTCTATAATAATTTCAAACCTGAGTTTTTTT
TAAATCTCAATGAAAGCTGTACCTTATCTGAAATGTAAATTAGTGTAAAAACCCTTTCATTCTCAATAATTGTCGGCTA
CTATCTTTTTATCTTCATGTTCATCAATAGTAAACATTCAACCTTCAACGGTTAACAAATATTAAGTGTTTACCATGTA
CCAGACACTTTTCTACATTCTGGGGTGACAGATCTAGAATTACAAGTGTATCAAATATTATAACAGACAGGTGGAAGGT
GCTACAGGATCAAATAAGAAGAGGACATAAACTTAACTGTAGAGATGGGTTGGGGAGGGAGGAAGAAGTTAGTGTTAGA
ACAGGCAACTTTTAAAGAATTAACCAGGAAGTTATGCAATTTGGGGTAAAGTGGGAAAGAGTGTCAGGGAAATGAGGT
TGAAACAGATAATATAAGATTTGCTATTTATTCAAAAATAGTTTAGAGGCCAGTAATTGGCTGGGAGAAGAATGGTGCA
CAGATGGGCAAGTGTTGACCTGCAAGGCCAATTAGAAAGCTGTGTCTATAAGTAAAGGCAAGAGATGAGGATGACCTGG
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TGGGCCAAGTCTCCCTTATACATCAGGAATGCACTGATGTAAAGACAAGATATCTGCTCCTCCAGCCACCTTTCTTCCA
GGTCTATCTGCCTTAATTCCTCTTCCCCCATTCTCAGTGGTGCATCATTCTCTACTGCTGTCCTAGTCCTGCCTCAGTT
TTCCATTAGTTTTATTTTGCAGCAGAGATTTTTTTTTTTTTTAGTGATCTCCTATTGTTCCTTAATCACCCTTGAAATA
TACCTAATTAACCCAAGTAAACCTTCATGATGCATGTCTCTTCATCCTAGGAGTATAAATGATCCTTGTATATCTATAG
GAACGTTTCTATTCCAGTCTTTGAAATTGAGGAATTTCATATACATTATATATATATACACACATACAGACACACACAC
ACAACGTGTATATATGTGTATATATGTGTATATATGTATATGTGTGTGTGTATGTGTGCATATACATATTCCATTAGTT
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AGGATTTCAGAATGAAAGTTATGTAGTAAATCCTAGCCCTTTCCGAATCCTGATTTCCTAAATCTAACCTATATGGAAT
TTCTTTTTTTTTTAATAAAGGTTCCATGAAACTTGGCCTCTTTCCTATCATCTTAAATCGTTCTCCTCTTATACTTCTC
TTAGTTCTACTTCTTTCACGTGAAATCCATTCTAATGTGAACCTCGGTTTCTCTGAGAGGTGCCTCACCACAATGCCCA
TGCCTTTCTGCACTTCCCACGTAGATCTTCTTGCCCCAAATACCTACTGTGAGCCTTCTTTCCTCTGTGCCTTTCATTA
TTCCACTCATCTGAAATTCAGTCGCACCAACTTTTTAAGCACCTTTATCAGGCACTGTGGTCAGTAAGGTTTACAGATG
AATAAGGCATGATTGCCAGTCACTGACAACAAATTTGGGGCAGGGAGAACAGCCCCATCCCCATAAATGGTCTCATGTT
TCTTTTGTTTGTTTGTTTGTTTTGATAGAATCTCACTCTGTTGCCCAGGCTGGAGTGCAGTGGTGTGATCTTGGCTCAC
CATAACCTCTGCCTCCCAGGTTCAAGCAATTCTCCTGCCTTAGCCTTCGAAGTAGCTGGGACTACAGGTGCTGGCCACC
ACACCCAGCTAATTTTTTTGTATTATGAGTAGAGATGAGGTTTACCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCT
CAAGTGATCCCCCCACCTCAGCCTCCAAAAAAGCTGGGATTACAGGTGTGAGGTACCGTGTCCTGCCCATAAACAGCCT
CATTTATAAACCATAAATACATAAGTGCTGAGATAGAGATTTGTGTGTGTGTGTGTGTATTTGGGGGGTGGTGGATACA
CTTTGCCCAACAAATCCAATATTGTTTACTACTTCCTGTGCTTCCCACATGACTGTTCTCTCATCTTTCTCTTAAATTA
ATGGAAATACCCTCCTAACCAGTTTTCCGACTGGTGCTTTTGCCCATCCAGTCTAATCTCATAGCAGAGTTATTCTACA
AAAACAGTAATTAGTTCACATCGTGTTGCTCTCTGCTCAAAGCCATCCAATGGCATGCCATCTAGAGTCAAAGTCAAAT
TCTTGCTATGTCTGTTAAACTTCTACATGATCTATGTCTACCGCCCCTTTCAAGTGACCTGGATCTGACATCTTCTCAA
ACCACTGTCCGCCTCACCCACTCACTTCTCCACTCTGACTTCACTGGTGTTCCCTGAATGTGCCAAGCATGTTCTGCAT
CACAGCCTTTGCACTACCTGTTCCCAGTGCTGGGAATTCTCTTCCTCTAAGTATCTGGATGGCTGGTTCCATCCTGCCC
TTCAGATCATCGCTCATATGTTACTTTAGCAGTAATCCTTTCCTATTCATGCTTTTTCTTCCACCTTGACGTTCCCTGC
TGTATTTTTATTCATAGCACCTATGACCTACTGTATCCTTTGTTATCTGTTTATTGACTGCTTTCATCCAACAAGAATG
TAAGCTCTATAAGGGCAAGGGCTTTTTTCTGTTTTTTCACTGTTGTATCCTCTGTGCCTAGAATGGTACCTGTCACATA
ATAGGTGCTCAATGAATATTTGCTAAAGGATGGAAGGAAGAAGGGAAGAGGAGGAAGGAGGGAGAGAGAGAAAGAGGAA
AGTTGAAAGAAGAAAGGAAGGGAAGAAAGATGGTAGGGAAGAAGGAAGGACAGCAGAAAGTCTCATGTTGGCTTTACTA
AGTCTCTAACACTTATTAACACCTGCTTTGTCTTATAAACAGAGATAACACCGGCCTGTAGCCTAGTGCCTTTCGAAGG
CAACATTATCTGGATAGAAACTAATAAGGTTGTTCTGTTTATGCTGCATTTATGGCAAGAGTTACTGACTTTCCATTTA
TAGTTGTGATATAAAGTTTCTTCTTTAAATGAAGACATTTTATTTCAGTTTTTAAAAAACTAGTCTATTACAGAATTTT
TAAAATTAATAATAGTATATAGGGGATGCAGAAACAACAAAAATCATGATGTAGAAATGTGGATATGGCAGAATCATGA
AGCTGGTAGTCGAATGCCTGAATTGGGGATAAGTGACCCCTTCAGCCATGAAACATTCCCTGACTATTGCCATCTTCCC
CTCTTTCATTCCTGTTGTTTATTCGACTCCTGTACACTATCATGGGTTGAACTGAAACCATTTGGTATTGCTCACTGTT
GTTTTGGGTGTTTTAGTTCTATCTTCCTAAATTGATATAAGATCCTTGATGTGAGTGCTCATGTCCTGCCCCCCTCCTC
CTGGGCAGCCACCATAGTGCACAGCCCAGCACTGACAAAACAGAACATTAAGGATGTTTGCTTGTTGTATTCATCATGA
CTCAGCTACACAATAAGACATGAGGTTAAATAGTGTGCAGACAGTAAAAATACTCGAGCGTGCTTTATTTTTTTTTTTA
GCAAAAGAAATACAATAGCAAACATCATTTTGCCTTGCAAACTGGCAAAATGAAATCACTATTTTTGCCACTGGTGTAA
ATTTTATACACACACACACACACACACACACACACACAAACACACAAGTACATACATATATACTTATTCAATCTGGTAGGA
TAAATTAATCACTAGGACAAAACCATGAGTTAATAGGAGCCAAATTCCAGCACATCCAATTGGAATGCTTGAGAATTAA
ACCTGCTAAAAATACTGACTGGAATAGGAAGACATTCATAAAACGATTAGGCACATTTTAGTGGAAGTCAGCAACAACA
AATAATTAATTGATTTAACTAATAAATTTAGATATTTAAATTGTCAAGGAATTCTTTGTTCTTCTGTTTTATAAATGGT
ATTAGCATTATCTTTTTTACTGGAAACTTTAAAGGTGTAAAATACTGTCAAGAGCAAAAGCAACTTAGATTGCCTGTAA
TGACCATTACATTGACACCATTTTTTGCAGTATGATTTGCTATTAAATGTGAATAACGTGAAGAACAATAACACTCCTA
GATCACCTGCTATGAACCAGGCACTGCTCTAAATAGCTCAGGTATTTTAACTCATGTAACTGCTACAACCCTATGAAAT
ATATCCTCCTTTCAGCTTCATTTTACTAGTGAGGAAACCAAAGCTCAATGAGGCTCTGTTAAGTTACCCCAGGTCACAC
AGCTAGTAAGTGTCTGAGCTGGGTGTTAGTGCACAGTGATCTAGCACCCAAGTCCATATACTTAAACACTACCTTTGAA
TGCTGCTCTGTACCCTATATAAGGAAGCTGTGGCCCAAATAGGCAAACCTGTGACAAACGAATCCTAGAGTCTAAAACA
AAGGTTGAAAGGTGACTGTAAAAGTAGGCATTTGATCTTTAAAAACCAGGTGAATTTGACCTGCCATTCTTGACGGCAT

Fig. 9.231

TAGTAAACATTACATTTCTTATAATTTACATTAAAAATCTAATACTTCGTTTACAAAAAAAGACTTTCAAAGAATATGC
ATGCATTTTATGCAAGGTTAAAGAAGTTTTCAGTGCTGGCTAGTGAAATGGGGGTTAGATGCCCTGTCTATACTACATG
TTTAATCAATGTAATCTTAAAATGAGATGACCTTGTAGCCAAGCATTTTTTCTTTCCTTTATAAGCAATATTAACTATA
TTAAATCAAGAAAGCTAATAGTTTTTCGTATTTCTCAATAACCATTAAGTTCAAACATTGGAAGAGTTTAATATTTTAC
ATGAAAAATCCACAGGCAATAATTTTAAGTGACTTAGAAAATATTTACCGTATTTTAACCTTAAATGACTGTGTATGTG
TGTGTGTGTGCCTATGTGTGTGCCTATGTATGTGTATGTATGTTTATAATCTAGTAGTTCTCAAGGAGTATTGGAGAAA
GAATATGTGATCACATGTAGTTTATAAAAGCTCTCGTGTTTTTTGAAAGACAAATTTTTTGTCAATCTAGTGGTAACAT
GATACTAATTTTTTAATTAATTTTAATTTCCCTGATAATACATTTAAGCCTTAAAAATATTGTTAGTGATTCATGTTTC
TTTTTCTATAAAAATTATTTCTAAGCCTTCCTCAAATTTCTTCCAGACTCTTTTTTCTGATTGATTTTTAAGAATTTTA
AAAATATTCTGCAATTTCTCTTGATCACAACAAGTGTTGGAAATATCTTCTCCCGAAGAAAAGAATGATTCTTAAAAAA
ATACTTTAGTAGCAGTTTTTTTCTATGAAAAAAATTAGAAGTAGCTTTTTCTTGGCAGCGTTTTCTTCTAGAGCAATAGG
GAGGAAAACAGAAAGCTGTAGACTGTTATCTTCGTCCATACATATGTTAGTGCTGGAACTCAACTCCAAAAACTTTGTT
CCTTTGAAAATCATATCCCTCCAGAATTGGTGGAGTGGTGATGGTGTGGTGTTGAAGGCCTATTGCCAGGACTGAGAAG
GAAAAGCTAAAGAAAGAGGGAAAAAAAAATCCAGAGAAAGTGACTGCCTGGGGAGGAGGGATAGGCAAGAGACCAAACAT
CGATTCTAAAGGGAATCTTGCAAATGCTCTGGCAAGTCTATGTATGGGAACATCATTTGCCTAGAAGATGCTCCCCTTT
ACTCCCTTTTTCCCTATTGGGCTGGTTTAGAGGTCAATAAACTTAATTATTTTACATCTAGTAATGTCCCAGATGATAT
AAAATGTCATTGTTTTCATTCTATCATATAGTTCATGAATCACAGTTAAAATAATGTTTCCCTTCTAAAAATTTTTCAA
GTTTTTTATTTCACCGTAAAGTTCTTTTACATATGGAATTGAATTCTGTGTGCAGTGTGAGAAGAAATCCACTTTTGTA
TGTTTCCCATATGGCTAACTAGTTATTTCCACACCATCGATTGACTGATCCATCATTTTTCCACTGACTGGTAGTGTTA
CCTTTGACACGCATCAGTACAGTTGGTCTGCTTTACCTTTCTAGCTATAATTGTGGCGTATCCCTCTATTAATTGCCTC
CTTTAGTGTTATTCAGTGCATTTTATACATTTTGTTACGAAGATCTTATACATTTTTTATTCACATCCACTGTAGACTT
CTGTTGCTATTACAAAATGGCAACAATTTTCAGTTATATTTTCCAAATGCTTGCTGCAGCTATATCCAAATCTAATAAT
TTTTATATCGAACAAATATTTAGAAACTTTTCAAACTTTGATGTACTTTTAATGATGTTTCTTCTGATTCTTTTAGGTA
TTCTTTGTAGACAATCGTATCATCTGTGAATAACAAAAATTTGTTTCTTCCATTCCAATTTTTATACTCTATATTTTAT
ACCACTTTTTAAAATGATTTATTGACTGGCTGCACGGATGCTTCTCTGACTTTAAAATATGAATCCCTGAGGGATCCTT
TTAAAAGGAAGATCTTGGTTCAGTGGTAGGTCAGGCACTGAGAACCTGCATTTCTAACAAGCTCCCAGGTGACAGTGAG
GACACTTGTCCAAAAAAAGCAATGCTTTCAAAAGACTGTTAAATAGAAATGGAGAGAACAAGCATTCTTTACTTGTGTC
TACAATTAAAGAGCATGCTTCCACATTTCACCATCAAGATTAGATATCTTTGATTAGTTTTGGTAACTTCCTCCTATTC
CAAATTTGCCATACATTTTTATCGTGAATGGTTGTTTAGTTGAATAATTTTCTGTGGTTTTTCCCCTTTAATCTCTTAA
CATTGTGAATTATTAGAACATCTCATGTTTAAAGCCTTTCATGCCATATGCACACAAATATACATACACATATAGGTAC
ATAGAAAAATATGTATTTATTGCTGCTTTATTTGCTAACATTTGGTTTAGACTTTTTAACCTGTCTTTATGATTCAGAT
TGGCTTCATGTAATCCTTGAGGATTCTTAATGTTTTTAAGTTTCATTATAGAATGAATTAGGTGTATACCCTCTTATTC
TAAGCTCTTTACATGGAACTCACTTTTATACTAGTTTTTGAGACACACTCTGTTATAATCAGCATCTTACTGATGAAGA
AACAGAGGTACATGGAGGTTAAATAACTAGCCCAAAGTCACATAGCTAGTAAGTGATAAAATTCGTTGGTTTTTGTCTG
TTGAACAATGAAGAGAATGGTTTCCTAAAATTTGTTTTGTTTAGTCACTGATTCACTAGTTCAATCTTAAATGTAATTC
AGTAGTTCAGTCCTAGAAACAGTTTTCAAAGCCACTAAAAACAGATTTAGATCCTAGTGAGGTAAAAATAAATAAATAA
ATAAAATGATTTTGAGGCCACTGAGAAAAGTGGGGCCCCTAGTAATTTGTAACAGCCTCCCACTCCCTATCAAGAGGAG
GTGGTAGACCGAGATTCTAAATTGAAAAATGAAGGCCGGGTGCGGTGGCTCACGCCTGTAATCCCAGTGCTTTGGGAGG
CCGAGGCGGGTGGATCACAAAATCAGGAGATCGAGACCATCCTGGCTAACACGGTGAAACCCTGTCTCTACTAAAAATA
CGAAAAATTAGCTGGGCGTGGTGGCGGGCGCCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATGGTGTGAAC
CCGGGAGGCGGAGCATGCAGTGAGCCGAGATCGCACCACTGCACTCCAGCCTGAGCGACAGAGCAAGACTCTGTCTCAA
AAAAAAAAAAAAAGAAAAATGTAAACACTTACCTTGGCTTTGTCACTTAATGGCCTATGTCAAAAGCTTAATTTGCTTC
ATGATTTCATTTAAAGTGTATACCTTTCACTGAATTCTGCAGTGATTTAGCATAATTCACTAATAGGTATATGCCTATC
ATTTTCATAACCTTTCAGGAAATCATTTGGCCCTAGTATACTGACTTTCGCTCTAAGTTTTCCTTTATACCTGAATCTC
AATCTCTCTTACTGAGATTTAAACCTGTATCTTTACAGCGAACTTCAGAAACATGGGAAAGACTGTCATTATCCTTCAT
GAAATCCTGTGGTCCACAATGAAGCGTGTTTATTTTGTTACCACTCAGTTTGATTTCTTTCACATTGTTTCATGGTTTT
TCTTAAATTCTTACTTACTCTTTAGCATGTGGAAGTACTGCCTTTCAATGTAAGACATTTTACTTTAACAATTCAAAGA
GATTTTTTTTTCTATGCTACGTAGATATTAGGGTACAGAAGAAAATACAGGAGACATTAGCCTGCTCATGAAGGTTATG
AACTGCACAAATCATGTAGTCTTTTACAGGTTTAATTGCCTCATTTGTGAAAGGAGGTTGAACTAGGCAGTCTCTCACC
TCTCTGTCAGCTCTGATGTTAAAGGATTTTGTTCATCCTTACAATGTTTTCTCATTAAAGCTCAAATATGCATAATTAA
TGTAATGCATTATTTTTTAGGAGATTGAAAACCTATCATCTAGATGATGTGCTAACCTGATTTTTGTCAATATCATTCT
TGATTCTGTTTTTATATCTCAATATGATACAGAGTTGCAAAATATTTCTAAGCTTTGATCATTCTTTTGGGCATATTCC
TGTAGATAATTTTGAAATGATATATTTAGTGGAGAAAATGTAAAAATAATATTAAATCCTTCTAAGAAAAAACAAATGT
ATTAATAATTAAATAGCTGCACTGTAAACCAATATTCACTATTCAATCATTGATTACCAAAAAGATAGCGGCATGAAAA
ACCTCTATATTTTTATCTCATGGTTTAAGATGAATATTTTGCCCTTCATATTTATCATTTTTTAAAAAAGAACACATTT
AGACTTTGAAAACGATATGTAATGTGCTTCTACATTAATGGGAAAAACAACCTAAACTGTATAGTCAAATAAAATATTG
GAATCTTATACCTTGACATATTTTTTTAAACTAGACATCATCTAATTTCTTTTCAAAAATAGAAATAACTTTTTATCTT
TGTCCTTGGTATTACTTTATACTTGTCTGTTCAGTGGCATTGCTATTCTGTGATAAGATTTTATTACAGAAAATGTCTC
TATCTGTACTTGAACATTAGTCTAATTTTTTTTACAAATGTTCCTTGATTTGACATCTGTCAACTGATTTCTGAGTTAA
TATTATCTTTTCAGTTTCCATTCCTTTGAAATAGGAAATCCAATATTAAACCCTTCAATAAAGATGAACCCTACATCTG
TATATCCAGAATTTTGGTTTGATAAAACCAAAACTGATAAGTTCAATGGGGTTAAACATTCTTGAAGTAAAATTGGAGA

Fig. 9.232

GACATTTGAACACCTTTACCCCAAGTTCATTCATCTATTCATCTTCTCTTTAATTAAGTCTGTTTGAAAAAAGCTTTCA
TTGATTGTTAGCTTCCTGGAATATGTCCTAAATATCATAAGGCATATGGAGCTCCATGACTCCTCAGAAAAGAGCACGT
TGATTGATCAGTGATTCTGCATTAGACATGCGTGCTACAAGTTTGATTTGACTGACCCAGAGAGGAATATAACCTTAAT
GGAAACAGAGAAAATATCTTCATGTCACTTGGCTTAGCCTGCTCCTTTCAGGGGATAAGTTGCCACAGCATTCAAAAGG
GTGTAGTCTATGAATATTTTTAGAATCTCTAAAGATGAGGATTTTACAACATGGTATTCAACAGCAGAGTTTAATTTTT
CTTTTTTCTCACTTAACACTGAGTCATTAACAGTTGAGACATTTTACATGACTGTGAGCAGTTGAGCACAAAAACCAGA
TGTTAAGATTGGGTACAGTCAAAAGTTTAGACATCCACACCTGTGTTATGTTTTGTTTATGTTCTGGAGCGCCAAACTT
TGTTACATCTTTGAACCCACTTCAGACCTCAAATTACCACATTTTTTAAAAGCCTCATTAGAATGGTATCATATAGTGC
TGAATCCATAGAACAGAAATTCAGTGTTTTCAGATTGCTAATCATGTATGAAAGTTTCTGAAATCATATTGTCCAACGG
GCTGTAACTTGGCCTATTCTTCTATCTCCTAAGGAAATTGAATTGACTGGACACTGTTCATTATAAAGATACAGCAGGT
ACTTCCTTGTAACCTGTGCTCTTCTATATATTTTGAAAATTATTATTCATTTTCATATTTATCAAAGTGAAAAAAGCAA
CATAGCTACTCTACTTATATAGCTCATTTTAAGGAATTTTATACTTGTTTTCTAGTTTTGTGAATTTCTTATGAATTCA
CAAAAATAATGTAAAAGCTAATGGTCTGTCCCTGCTACCATTGTGCATATTAGTCAACAAGTACAAGTAGAATATTTAA
AAGATTTATTAGTTCCTAATTATATATAGAAAAAGACTTTGAAAATTACTTAAGCCATGATTCTACCAAGATGTAACCA
CTTTTATTTTCTTTTTTCCTTCCCAATGTTGACTGGTTATATGCATATTAATGGAGCTATAATAATAATTGTATACTTT
TTATCTTACTTTCTAAACCACATTATTATTCCTTAAATATTGCTCTTTCTTCTGACACAGTCTTCTCATGTATCATTTT
GATTACTACATAATATTCTGACTTAATCGAAACTTTTTGTATTTTTTGATGTTCAAGCTTCTTTTCTCATTTGTTACTA
TTAGAAATGATGGCTCTAGAAACATCCTTAGAAGTTTTCCTTATCTTTTAAATTAAACTGCTTTTATTTTACTAAAATA
ATCTTTAAGAACTGGGATTACTAGGTCAAATTCTACAATCATATTTGTGTCCCCTGTCATTTTGTAACCAAAAAGATGC
TATTTGAGTAAGACCTGCTTGATAACTTACTTATTAATCTTATTTTATTTTGTCTTGCATCACAAATGAGTCAAATTCT
ATTTTTCTCTAATTAAATCTTACGATCACCGGTACTTGGATTTAAGTTTTACAGTGAAACAGAAAGAATTTTAAAAAAC
GGTTTAAGTAGGAGAAATTATATTTTCAGATCTCCTTGCCTATCTGCTGGAATCACTAGTGCCACCACTTTTCACTGGT
GCTCCTTTTGCTTCACTTAACTAAAGAGTTTTCACTCAGACCCTTATGATTTCTCCAAGATGCATTACATTTTCCTGCT
GTTTCCATATACCTGGGAAATAGTTCTTTCATTTACATCTTCTGTCTCTATATTTTTCCAGGTAAGTCATGCCTCCTTT
AAATTTTTACTATTTTTTATCTATGTCTGTCTATCTCTACTAAGATGTTCTCTACCTTTGTTTCTGTCTACCTAACTAG
CTAGCTACCTACCTACCTATCTGGAACTCTACCTCTGTCTCTTATACTATGCCCATTCTTCTCTTTTCTCTTTAAAATT
TTTTTGTTGCTGTTTTCTCTTTTCCTCTATTTCTGTATCTCGTTTGTGTCAAATTGCCAGACTACTTAATTAGTATATT
CATGTTTGTTTTTGAATTTCTATTACTGTATTTTCTCTTATTAGTATTTGTTTTTATAATTATTATTTTCCTTTACTTT
TTTGTGTTTATTTTCCTATTTTTTCTAAGTAAGTTGCTTTGTGCATTGAGTTTTAGCCTTTATTTCTAATACAGTGATT
TAATTCTATTGCTTTAGTGACAATCCCATATATTTGATGCATAATATATTTATTATTAAGTTTTAAGTATTTTATAAAT
CCCTTTGATTTCTTCTCTCACTCAAGTGTTATTTAGAAGTACTTTTTAAATGTTTTCCAAAGGAATGAGTTTTTAAATA
AATACATTGTTATTAATTTCTAATTTTGTTCATCTTTAACAGAAGAGATATTTGTATAGTACCTATTCTTTGACATTGT
TGAAACTAAACTGAAAATATTAGTTAATTCATGAACACTGGATTAATTATAATTATAATATTCAAAAAATATAATTATA
TTCAAAAGTATAATTATATATAAGTTTATATAATTTATAAAGTTTATAATATAAACCTATATTTTATATATTTATAACT
TAATATAAAATTATAAAGTTTATAATATAATTATAATATTCAAAAATATTAATTTAGGCTTCCTATTTATCCTGCTTTC
TAATGTTTGTTTTCTTTTCACGTCTTTTCTGGCATTATTTTAGATCAAAGTGATTTCCTCCCTTTTCTCATTGTATTTT
TCCTTCTAGTTTGTAAGTTTTAAACTCTAATTCTATTATTTTAATAATAACCCTAAAAAATTTCCAAATATGTAACTT
AAGGCTGAAGTTAAATAATATCTTTACCCTTTTACTGTCCTCCTGAGAAAATACAAAAGAATAGATTTTTGTTCTCTTC
ATATTTGTATTACATTGTAGACATTATCATTATTATTATAGTTGTAGTAAGTCATCTTTGGTGAACATTTTCTAACACA
TTTTCCATTTTCTTTGCTCAGCATTTTTTTTTTTTTGCATCTGAGACCATCCTTTTTATTTAAAAATGTCTTTTAGAA
GTTTCTCTAGTGACTCTCCAATAGTAGGGAATTCTCTTCATGTGTGGTTTTCTTACTATCTTATTTTGTGCTTAGACTT
GGAAGGTAGTTTTGTTGTGTATGCATTACTGGGTTGACAACTACTTCTCTTCACCTCTTTAAATACGATACTACCTTGT
CTTTTGAGAAATCACTTTTCAGTCTGACCAGTGTTACTTTTTTCTTTTTGGGTGCTTTGAAATTCTTATTTTTATCTTT
GTTGTTGTGCAATTTCACTCTAATGAATCCAGAAGTTGAGTTTTTCAAAAGTTTACTTAAAATGTATTGGTATTCCTAA
ATATGAGTGTTGGTGTCTTTTATTTATTTTGGAAAATTCTTAGCTATTATTGTTTCAAATATTGCCTCGTTGCCATTCC
TTTTAATCTATCCCAACCCTAGTAAGACTTATGTTGGCCCCACTCTGTCATTCACCTATCTTAACCTTGCTTTCATATT
TTCCACTTCTTTTTCTACTGCATTCTGAATGTTTCATTCATATATGTTTTCTGGCTCACTAATTCAACCTTCAGTAGAG
TCTAATTTGTTGTTTCACCTGTTTGTTGAGTTTCTAATTTCAGTTATTAGACATTCAATTTTAGAAGTTCTATTGGTCT
TTATTCTAAATATGTGTGTTGATTTTTATTGGTCTTTTGCTCATTTACTAAATTTTTTATCATTTCTTTAAACAGCTTA
AATATTTTTTTTTATTTTAGTTCCTTGATAGTTCCAATATCTGTAATCTTGTTGGTCTACCTGTGCAGTTTATTCCACT
GATTGTCTCTCAGGCAAGTTTATTTTTTTTATGCATTTTCTATATTTTTTTACATATGTGAGCTCATACTCTTTAGTAT
TTTATCTCTGGAAATTATCTGTGTTGAAAGTGTATTTTTCGAAAGAGGATTTGCTTATAATTTAAGTAACTGCATGTCT
GCTAACTATAGATTTACTTTAAATGAAATGTTCAACTTTTGGGCCACGCAAATATCCAATGCCATATTACATATCGCAA
GTATACACTTGTGATTAGAAATTTTTGAAAGAAATATTTGTTTTAAATATGCTGCCTGAAACCAAGACAAGTCTTGTTC
TGCATGAAAGATTGTAGCATGCCTAGTTATAGGTATTGACTTTTGGGTATAAGACTTTCTGTGAAGTCTGAATGTGAGT
TCTTTCTCTGTTTAGGCCCCTTGTTTAGATTCTTGCCCTGGAACCCAAAGAATTGGTAAATGCCTTCAGGAAAAAAACA
AAAAAACAAACAAAGCAAAAAACAATTCTAGTACTTAGTTATCCCTGTGGGACCAAGCTTTCTTAATTTCAAGCCTCAA
AAACTTTTAATTTAATGATTTAAAGCAATCATCCAGTATAATTTTAGAGCAAATTTTGTTGAATTATACCATAAGAGGA
AAAAGCACACAAACCTAAATGTAAAATGTGGTAAATTTCCATGAAGATAACATACCCATGTAAGCAGCAATTAGATTAA
TAGGCAGTATATTGCTAAGCTGTAGAAGCCCCCATTTGTGTACCTTTCAGATTCTGCCCCCACCCCAGAGTAACTACTA
TTGTGATTTCTAAGATAATATTCATATTATTTACCAAAGAGAGTGTGTTCTTTGTTCTCTAGCTTCTTTTCCTCAACAC

Fig. 9.233

TGTATTTGGAAAAGTTATCTTTCTTTTTTCTTTTCTTTTCTTTTTTTTTTTTTTTTTTGAGACAGGGTATTGCTCTGT
CACCCAGGCTGTAGTACAGTACCATAGTCATAACTCATTGCAGCCTCAAACTCCTGGGCTCAAGCAGTCCTCCTGCCTC
AGCCTCCCAAGTAGCTAGGACTACAGACATATGACACCACACCTGGCTAATTTTATTTTATTTTTTTGTATAGACTGGG
TCTCGCTTTGTTGCCCAGGCTAGACTCAAACTCCTGGGCCTAAAGGAACATTTGTCTTTATATATGTAGTTGTAGTTCA
TTTTCATCTTCATACAAATATGTTATAAATTATTTATTCATTTTATTGTTTTGTTTTGTTTTGTTTTGTTTTGTTTGAG
AAAGAGTTCCACTGCTTTGCCCAGGCTGGAGTGCAGTGGCACGAACTCGTCTCACTGCAGCCTCTGCCTCCAGGGTTCA
AGCAATTCTCCTGCCTCAGCCTCCTAAGTAGTTGGGTCTACAGGCACCTGCCACTACACACGGCTAATTTTTGTATTTT
TAGTAGAGATGGGGTTTTGCCATTTTGGCCGGGCTGGTCACGAACTCCTCATCTCAAATGATCCACCTGCCTCAGTCTG
CCAAAGTGCTGGGATTACAGGTGTGAGCCACTGTGCCTGGCCCATTTTATTATTGGTAAATATTTGTTTTATTTTTATT
TGAAACTATTACAAATCATGCTGCTATGAACATTACTGTATACATCTTTTTGTATAATGCATATATATTTCTGATGGGT
ATATAGCCAGAAGTGGAATTGCTTGATTATGAGGCATGCATTTTTTGAAGACTGACAGACAGTTTTCTCAAGTAGCTTC
TTCAATTTAGATTCCAACCAATATTCTCTATTTTCTAAGAGCTCCACATTCTTGTCAACACTTCGTATTATCTTTTTCA
TTTTAACCATTCTAGTTGAGTAATATGTAGTGTTATTTCATTGTAATTTTAATTTTCACTTCACTGATGTCTAGTGATT
CTGTGCATTAATTTTTTTTTCTGGACTTTTGAAGTGTTCTGTATGGGAAACTATTCCTCCATTTAGCTAGCTATTTTGC
TGGAAATTATTGTATAAAATATCATCTCATAATTTAACAGTATATTCCTTCTTCTCTTCAAATTTTTATTAAAATAATT
TTTCAGTACTCTTGAAGTCAACTTTTAATTTGTCCAACCTGTCTTTGAGCTCCCCCTGCTGTTTTCTATTTAAACTATA
TACCTGTTGATTATGCATAATTTTCTTTAAAATGATGGATTCTTAGCCAATAAGCTATTTTAAGCAGAAGCATTTTTTT
TGCCAAAGACTAAGGGTATAAAATAAATTTAAATGCTAACTCAGGATATAAGAATTATTAAAATTAATGCTTGAAAACT
AGTATGTTACATATGGGAAATCTGTATACCTTCATAATTTCACTGTGAATCTCACTCCTCTAAAAAATGAAGTCTTGAA
AAGTTAGTATTTTAAAATACTTACCTTACTTGTAATGTGAAACCATTTATATTAATTTAGCAAATCAATGTTTCAAATT
ATTAACAACTAGACAAACTACTGAGCCATATGTTAGGTATATTGTAAGCATGTTGAAGTCAACAACATGACTTCTACAC
TTTCTACTTTCTCACGGTTCCCAGAATATCTATTTTGACATAATTATTGAAAAAAAATTAAAAGCATTTATTCCATTGT
CTTGCTACATCTAAATTCATGGTGTTATGTTTCTTTAGGGCAATGGAGCTGAAATGAATAATGGATACCATGTAGTGTT
TTTATATATTTCATCTATGAGCTATGACAGATATCTCCCTACATTCCAGCAGAAAAAAAAATGTGCTTCTTTCCTAAGC
TTGCCAGCTATAAAGGCCTATTAGACATTCAGAGATTATCAGGAAGCAAAAAGCTTCATAGTCTTAACAACGTAAATCT
GAAGTCTTAGAATGAGTTCATTAGAATATAGACATTGAATATGAGGTAAGTCTGAGTTGAAATTCTATCTCTGACAACT
GCTGGATCTGTTTTTGGTTTCCAATAGTAAAATGGCACTAATAATGATATATGCAAAATGTAAAATGCTTAGCACAGTG
CTTGGCACATAGTAGATTCTAAGCTGTAGTTTAAACAGCTATTGTGCTATGAATAAGCCATACGTTGACATTTTCCCTC
TTGAGAATGTGCTATTTAAGTGTAGAAAACCTGCTTTCCCCTGTCCGTGTGAATTTCCTTAACATTCATCTTGGAAATG
ATACCACATACCCTTATATTGATGCACTGCAAGAGGCCAATCTAATGTAGGCATAAAAAGAGTAATCTGGTAATCTGCT
CTTCTCAGCACCCTCTGCTAATAATGCTGTTTGAACAAATTCTAGAAAGACTGTTGATGCCAGAGCCAACTCAGAATTA
GGCAGGTGAATGTTTTCAACTTCTGCTAATAATAACATCAGTTCTGTACTCTCCTCTGGGTTCTTTTTGCTGTATTAAA
GCTGCAGTTCCCTTAGGTTAGCTTCTATGCATAACCTGGGAATGCATATTTTAGCTTTTTACTTCCCTCCCAAAGAAAG
GAGCAGAAGAGGAGAACCAAATAGCCAAGATCTAGAAGATGAAACTGTTGTATCCATTGTGTGGATTCAGATAAGCCTC
CACCCAAAATATGGTTCAAATGTTAAGACTAATGAGCAGCCCTACACTTCTCTCTCTCTCACTTTCACACACACACATA
CACAAACACACGCGCACGCACACACACACACACACACACACACACACACACACACACACATATACCCCTACCAAGAAAGTATG
AAAGTATGTATTACTTATAAAATTATGAGGTTTTTCTGGGGAGAGCAGAGCAGGCCTCCCAAGAAGGTCTGAAGTAGCT
TGAGAGAGCAGGGGGAAAATGACTGGTTTGAGATTTTATGACTTTTAGTGGGTGAGGCCATGCTGAGAGTTTTGTGTGG
GTGGACTCTGGTGTGGTTTGAATTTCCCACCATCACCAAAGGAGAGAACACATGGGCTTTCTTAACAGTTTTCCCAAAT
GTAGGACAGAGGGGAAGAGAGAGGTATAACACTTTAAAGCTATCAGCAATGACACATCAAAAAATGGACATAGATTTTT
TATTACAGAAATTAAATTGTATGAGAACAGAAATGAATCCCGGTGCTACACAGCTGATGTTTCCTAGGAATGAGAACTA
GGGTAACTTTTTTAAAGCACGTGTTTATATTGATTGGTACATACTAGTTAGCCAAATTTAACTGGGTTGAGATGGTGGA
CTTTCCTTTTGAACCTCAGTTATGCAAATTGTAAGAATTGTGTTTCCTTCAAATTACTCAAAATAATATTGAATTTCTT
ACAAATGCAAAATGAATTGTGGCTTAATGTGCATATGTATATAACAGATACTTTGTTCAACTATATTATGAAATACTAT
AGTATGTAACTTTCTTAAATAAACAGGATGACAAATCAGTGTTAGGATTCAAATGGGCCCTATATTACTCTGTATCTCT
CATAGGCCAAGTGTTAATTCTGGTACACATGACATTTAGCACATGCTATTACATTTATTGATTGCATATTTTTATCTGT
TATCTTTTGGTTCATTCTACAAGGATTCTTCAAAAGAAATCAAGTAATCCTAGACCCCAATATATAAAAGAAACCAACT
CATCCTAGACCCAATATATAAAAGTAAATGACATTTTGTTCTTGTCTTAATAAGTTCACAGTATTTCAGGAAACATGGG
AATACAGAATAACAGATAAGAAATATTATAAGACTTCTAGTAGAGAAATATGCTTAAAATCATATGTATGTTCCTTTAC
ACCTAAGAACCTTTAGATATAAATGCATTTTAACTGTTCTGGAGAGTTCCAACTCCAAAATAGCCTTTGTTCATATCAA
GAAAGTAAACCACCTTCTATTTCAGGTGGGCTTACTCACCATACCTGGGGCCACATTACTGTCCCAGCTCACTGAAAGG
TCATAATCCAGGATGAAACCAAACTTGAAAATTATAGTGAAACACAGTAGAATAATTTAGAAGCATATACTTTGATGTT
TTTAGAAAGTAAGGAAATAAAACTTTAATTGAACTTGGAATAAACTCAGTTCTGAGCATTCCATTCTACTCTGCAGTTG
TCATTTATAGACAGCTGTGGATCATAATACCTATAGACTAGATATCGTTATCTACTTATTTATATTAATGACAGGATAT
CCCTGGGCAAACAGCATCACCACTGTACTGTGTATTCTTGGTTGTCATGGGAACCTTTGCTGTGAACCAGCAGTGAGAG
CACTTCCATTGAATAAAGCTGCCTCTGGATAGCCATGAGTTGCATGAAGTTATTTTACTAATTTTATTTGCCTTTTACT
TGAAAGCATAAGTTTCTGAGGATGTAATTACAGTTTCCCCTATATTTCTACAGAAGTAGTTATAGATGATGGACCTCCT
GAACTTTTATCACTTTGCCATACTCTGTAAAATTACCTAAGAGCTCCAGAGCATGAAATTAACACTCAGGAATATTGTA
GCCTAACCTTTTTTGCTACTCTGAATAATACTGAATTGAAGGGTCTTCCACAGCAAGCCCTCTTTAAATTATGCTTTCT
GATGCTTTACCTAAGGCTATACACTTGTCTTTAGATTCTTCTAGATTATTTTCTCCTAATACAGAACTTAGCATTTAAA
TGACAATTTTAAAAATTGAGATCAACTCTTCAAAAGAAATCAAGTAAAAGCAATTTCAGCAAAAAAAAAAAAAAAAGCCT

Fig. 9.234

TCTAATCTCCTACAAAACACCTCTATCCTATCAAGATATTGTGATTGAGAATTAGAAATAGTGTGGAATCAGATGTTAG
TTTGTCCTTTCCTTTTCACTGGAATTTCTCCATGCTTTAATTTTTATATCAAGAAAAACAATTCTTGCAATATTCCCTA
AGGAGAGTTTTACAAAAAAAGAGATAAAACAAACTACACACACACACACACACACACACACACACACACACACACACTA
CCTTAAGGAATAAAGAAATTATCTGAGTGGAAAATAATGGTGCTTTCAATTTTCCTAATTGAATTAAAATAATTATCTA
AGTCTTTTTGATCTTGTCCCAAAGTGAATAAAATGTCTTTTTTTAAATTTATGTTTCATTAGATATATCTCCATCTTTT
CAGTATTCACCCCAAGTTTTAATTGGGTAGAAGAATATGGAAGAAATTCCTATTGCTCAGACACCATGTTTAAAGCTTT
CTGAATGTGATCTAATACCTCCATTGGTTGGAGGTAATTAAACAGAGATCTGTTCTTTTAAACAACTATTTGAGTGCTT
TAAATCTGAAAGTCATGTCATAAATGTCAGACCTCTTTCTCTTTGCTTTAATCATCTCAGAAAGACTTATCTGTTAATG
GAACATCTGCATATAGGTATTTTGTTGACCACAGGTGTTCCACATAAGTTTAATCTACCTATTAGTTATATGTTCATGC
TATTGAGGACCTTTCAATAATAAACTTTACTGAGTGCTTACTCTCTTCTAAGAGTAATGCACTATGCTAGGAGACAGGA
GGGATATAAAGGTAAAGAAACCATGGCATGAATCTTTAGGGAGATTATAATTTAGTGGAGAACACTAGTGAAAGGAGGC
AAAGGAATTAATAGAACAAGACAGTTTCTCTGAGTCTCCAAAGGCACTGTAAAAATTCCTGGGGAAACTGCAAGCAAGA
GCAAAATGTTAGCTATCATAAACATTCTCATGCATCTTCAGGTTTTATCTTCATCCATAAATTTACCCATTAAATTTAG
ACATTCTACTATCTATTCCACTTGACATTCCAATTAGCAGCTCAGCCTCAGCCTATCAATATGAATGCACATCGCTTCC
CTGTTCTCTTGCTGTGCCAGTCTTTCCCCAGTGTAGTTAGGTAGTGTCTCCAATCAGTCACCATCACCATACTGTGCTG
ATTTTATATTCTGAATATTTTTTAAGCTTTTTCCTTTTTATCAATTGACTACACTAGTTTAGATCTTCATCATATTATT
GTACACAACTGCTGGGTTTTTTCTGTCTGGAAAGTCTATTTTCCTCTTTCCTCCCCAGCTGCCTCTTTCTTCTGCCTCT
GGATGCATTTCCTCATTTTCCTGCCTTCCAAGATGTATTTAATACATTCCTCTGTGCTCTCATATGCTGATACATGTCT
GTCGCTGTATTTGCTGTGTAATATCCAAATTATTTGTGCATGTCTTTGTTTTTCTCCAAAAGTTGCAAGCTCCTTAAGG
TCAGGAGCTGTTCTTTAATATATCTACTCTACCTAGTGTAGTCATGCTTAATATTTGTTGAAGTAAACAAATCTGAACC
CCAAATGTATTATGTAATCTCCATATCCCAGCACAGATAAAGGATATGCTCTTGAATTGTTTTATTGGGAGAAAACAGC
TGACAGATTAGGCTACACAACAACTAAAAACTAAGAAATGACTACATGATAAATTGTAATGAAAATCGGAAGGCAGACT
GACTGAGGAATATATCTCTAACAAGTATTCAAAGATATAATTTTGTTATTGTTAAAAAGAATACAATGAATGGAGAGAG
GGTTTGGATTTCACATTCAGGACTTCTGAAGACCAAGTATAAGAGATTCAAAAGTGATAATGTGAATCTGATTAGAAAA
TTCAATTTTGGAATTTAAATAAGAAAAAAATTAGTTGGTCTAGCAGGTGAGGCTATAATATGGAAAAATGAGAAAGGGA
TACAGCACTGAAAGTGAAAATGTGGAAAGAGAGAAGATCAGAAGGGGAGAAAAAAAGAAGAAATAAAGGGTTAGAGTTT
ATGAACTGTACCAAAAGAAATGATACAATGGCCAGTCCTGTGAGGGTAGTAGAGGGATCTCTTTATTGTATTTTCTTAT
TTTATTTTTATTTTAGATTCAGGGAGTACACGTGCAGGCTTGTTACATGGGTAAATTGCGTGAAGCTGAGGTTTGGGCT
TGTAATGATCCCACTGCCCACGTAGTGACATAGGACCATAGGGAGTTTTTCAACACTTGCTCACCTCCCTCCTCCCACC
CTTTTGGAATCCTCAGTTGTTCAGTGTTTCCATATTTGTGTCCGTGTTGCCTCCAGTGTTTAGCTCCCACTTATAAGTA
AGAACATGTGGTATTTGGTTTTCTGTTTCTGTTTCAATTCACTGAGAATAATGGCCTCCAGTTCCATCCATGTTGCTGC
AAGGAACATGATTTCATCTTTTTATGGCTGTATAGTATTTCCTGGTATATATGTAGCACATTTTCTTTATCCAGCCCAC
CATTGGTGGGCATATGGGTTGATTCCATGTCATTGCTCTTGTGAATAGTGCTGTGATTCACATATAAGTGCAGGTGTCT
TTTTGGTAGAATGGTTTATTTTCCTTTGGGTATACACTCAGCAGTGAGATTGCAGGGTCAAATGGTGGTTCTATTATTA
GTTCTTGAGAAATCTCCAAACTGTTTTCCACAGTGGCTGAACTAATTTGCATTCCTGCCAACAGTGTGCAAGCGTTCCC
TTTTCTCCACAGTCTCACCAACATCTGTTACTTTTTGATTTTTTTAATATACTAGCCATTCTGAGTGGTGTGAGATAGT
ATCTCATTGGTTGAGTGTGGTTTGCTAATATTTTGTGGAGGACTTTTGCATCTGTTCATCAGAGAGATATTGGCATGTA
GGGTTTTTGTTGTTGTGTCTTTGCCAGATTTTGGTATCAGAAAGATACTGGTTTTGAATTAGGAGTTCCTCCTCCTTGA
TTTTTTTTTTTTTTGAATACTTTCAGTAGTATCTGTATCAGCTCTTATTTGTATGTCTGGTAGAATTCAGCTGTGAAT
CCATTTGGTTCAGGGCTATTTTTGGACATTAGGTTTTTATTACTGATTCAATTTCATTACTTGTTATTGGTCTGTTCA
GGATTTCAGTTTCTTCCTGGTTTAATCTTGGGAGGTTGTGTGTGTCCAGAAATTTATGCATCTCCTCTAGGTTTTCTAG
TTTTTGTGCATAGAGATGTACATAGTAGTCTCTGAGGATCTTTTATGTTTCTATGGGATTGGTTGTGATGTCACTTTTG
TCATTTCTGATTGTGCATATTCAGATCTTCTCTCTTTTCTTGTTAATCTAGCTAGCAGTATATCAATCTTTTTTTATCC
TTTCCAAGAACAAACTTCTCATTTTGTATATCCTTTGTATAGTTGTTATGGGTCTCAATTTCATTTAATTCTGTTCTGA
TTTTAGTTATTTCTTTTTTTTCTGCTAGCTCTAGGTTTAGTTTTGTTCTTGTTTTTCTGTTTTTTTTTTTTTTTTAGGT
GCGATTTTAGGTTGTTAATTTCAGATGTATCTTCTTGATGTAGACATTCAGTGCTAGAAACTTTCCTCTTAACGCTGCC
ATTGCTGTACTCTAGAGGTTTTGGTATGTTGTATCTCTATTTTTGTTTGTTTCAAATAACAGTTTGACTTCTGCCTTAA
TTTTTTGTTTATTTTAGAGTCATTCAGAAACAAGTTGATTAGTTTCCTGTATTTGTGTGGTTTTAAGAATTCCTCTTGC
TGTTGATTTCTGTTTTTTTTCCACTGTGGTCTGAGAAGATGCTTGGTATGATTCTGATTTTTTGAAATGTATTAAGACT
TGCTTTATGACTATGTGTTCAATCTTGGAATATATATCATGTGCAGATGAGAAGAATGCATATTCTGTAGTTGTTGGGT
GGAGTATTCTATAGATGTCTATTAGGTCCAATTGGCCAACTATCAAATTTATTAAATACAAAATTTTTTGTTAGTTTTT
TGCCTGTCTATTGCTTTCACTCGTGTGCTGAAGTTCCCCACTATTATTGGGTGGCCATGAAAGTCTTTTCATAGGTCTA
TAAGCAATTATTTTATAAATATGTATCCTCCAATGTTGAACATATATATATATTTAGGATAGTTAAGTCTTCTTATTGAAT
TGAACACTTTATCATTATGTAATGCCTTTCTTGGTCCTTTTTTACTGTTGTTGTTTAATGTCTATTTTTTCTGATATTA
GAATAGTGATCCTTGTTCTTTTTTTTGTTTCCTATTTGCATGATAGATCTTTCTCTATCCATTTACTTGCAGCCTAGCCT
ATGGGTGCCATTACAAGTGAAATGGGTATCTTGAAGTTAGACTTGTTTTTAGTCTAATTTGCCACTTTTTGCCTTTTAA
ATGGAGTGTTAAAACACTATGACAGGAATAAAACCTTACATATCAATATTAACTTTGCATGGCCAAAGTTAATATTTTA
TGTTAAAACACTATGGCAAGAATAAAACCTCACATATCAATATTAATTTTGACTATGCAAAAGTTAATATTGATATGTG
AGGTTTATTCTTGCCATAGTGTTATTATCTGGTTGCTTTGTAGTATTGATTCAGTCACTGCTTAGGGCCTGTGGGCTA
TCTGCTTGCATGTGCTTTCATGGTAACAAGGATCATCCTTTCCTTTTGTTTTCATGTTTAGAACTCTCTTAAGTATCTC
TTGTAGGTCTAGTGTGGTGGTGATGGATTCTTTTAGCAATTGCTTATCTGAGAAAGAATTTATTTCTCTTTCATTTATG

Fig. 9.235

AAGTATAGTTGGTGGGATATGAAATTATTGGTTGGCATTTTTTTTCTTTAAAAATGCTAAAAATAGTCCCCCAATCTCT
TCTGGCTTGTATGGTTTCTGCTGAGAAGCCTGCTGTTAGTCTGATGGGTTTCCCTTTATAGATGATATGACTGTTTTCT
CTAGCTGCCGTTAAGTTTTTTTCTTTCACGTTGACCTTGGATAGTCTGATGATTGTGTGCCTTGAAGATGGTCATATTA
TATAGTATTCTTCCAGGAATTCTCTGGATTTCTTGTATGTGCATGTTGACTTCTCTGGCAAGATTGAGGAAATTTCCCT
GAATTATATCCTCAAATATGTGTTCCAAGTTGCTTAGTTTCTCTTATCTCAGAAATGCCAATGTCACTTTACATAACCC
CATATTTATTGAAGGTTTTATTAATTGTTTAAAATTATTTTTTTCTTTATTTTTGCCTGCCTGGGTTGATTCAGAAAGC
TAGTCTTCGAGCCCTGAAATTCATTCTTCTGCTTGGTATAGTCTGTTGTTAAGGCTTCCAACTGTATTTTGAAATTCCC
ATAGTTAATTTTTCAATTCCAGAAGTTGTGTTTGGTTCTTTCTTAATATAGCTATGTTGTCTTTCAAATCTTGGATCAT
TTTTCTGGCTTCTTTGTGTTGGATTTCAACTTTCTCTTGGATCTCATTGAGTTTCTTTGCCATCTAGATTCTGAATTCT
ATATCTGTCATTTCAGACATTTCATTCTGGTTAGGGTTCATTGCTTGGGAGCTAGTGAGATTCTCTGGAGGTGGTAAAA
CACTCTGACATTTTGTATTGCCAGAGTTCTTGTGCTGGTTCCTTCTCATCTGAGAGAGCTGATGCTTTTTTCTTTTCTT
TTTTGAATTTGCTATTGTTTGGATGGAGCTTGTTGATTTTAAATTCTTTTTTCCCTTGTGGGTATGACTGTGGTGTAAA
ATGTGTATGGGTGGATCAGCTTCATTTCTGAGTGCTTTCAGGGCGCCAAGGCTCTGTATGGGTTCCTTGGTTGCAGATA
AGTTTGTGCGGTGGCTGAGACGTTGCTTCTTGTAGTGATGTAATTTTGTTTTGTAGTGTAATTCAGGCTGCAGCCCAGT
AGGTGGCACTTAAGAGTGAGCGCCAGAAGGTAGGGGCAAGGGCAGAAGCAATGGAAAAGTCTGCAAAGTGCCCTCCTTC
AGCGCGTTTGCCTTCAGTGGGAGTGGAATTGCTGGAGAAGCCCCAAAAGTGGTCTCTTTCAGCCCACACTCTCTCGGTT
CCGCTGGGGAGAGCCACCTTCGAGTCCGCAACAGTACACTGAAGAGGGATGAGAGAGGTGAGCGATGACCCCTTCTCGA
CAACCATTCCCTGGCTTTGGTGGCGCCCCCTTCAGTGGCTAGCGCAGTGCTCCTGTTTCCTTTGACCCAACCTTTGACC
CAAGAGGGGCTTTAGCCGGCTACATCCCCCTCCCTTAGGGGCCGACTGAACCGAGGGCTAGATTTCTAGGGGAGTGGGT
CCCTTCCCTTACCACTTTTCAGAGCTGGTGGGTTACTGTCCCCCAACTGAACAAGGAAGCCGACTGGGGAACCCAGTAG
TTGATATGTAAGGGATGCTGGGAAGTGCTGGGTAAAGAAGGGTGAGTCCCTGGCGAGGGCTCCACCCCCAGGCCTGTGC
CCACGGACCTAGGTGAGGACAGGCACTCCAGCCTTTGGGCCCAAATGTTGCATTTCCCAAGACCAACCTAGCCTACCAT
GCCCCCTACCATCCTGTGCCTATAAAAACCCCAAGACCCTAGCGGGTAGAGACACAAGCAGCTGAAAGTGGAGAGGACA
TCGAGGGGAGCACGCTGGTGGAAGAGCACACCAACAGATGCTGCCACCTGGCAGGCCGTCCAGCAGAGGAATGACGCGG
AGTTTGGTCGTGGCAGTCATAGGAGAGCCCGGGCTGCTGAGCGGCTGGACTCCAGGGGGAAACCATCTCCCTTCTGGCT
CCCCCATCTGCTGATAGCTACTTCCACTCAGTAAAACCTTGTACTCATTCTCCAAGCCCAGGTGTGATTCAATTCTTCC
CTCACGCCAAGGCAAGAACCCGGGATACAGAAAGCCCTCGTCCTTGTGATAAGGTGGAGGGTCTAATTGAGCTGGTTAA
CACAAGCTGCCTATAGACGGCAAAACTGAAAGAGCCCATGGTAGCACATGCCCACTGGGGCTTTGGGAGCTGTAAACAT
CCACCCCTAGATGCTGCCGTGGGATCGACCCCCACAACCTGCATGCTCCCCTAGAGGTACGAGCAGCAGGGCACTGAAG
AAGCGAGCCACTTCTCCAGTTGCACACCTTGCAAGGGGGACAAGGGAACCTTTCTCATTTCGTAGCAACACACGCAGAC
TGGTTCCAGGTCTCAAAGCTGCCCCTAGCTGCATGTCTTGCCACCCAGAAGAAACCTGGCTTCGGGAACTCTCCTGCCC
CTGCAGTCTTCTAATGCTTTATGTCTCTTCTCTATCGCATCCAAGCATTCTCTCCTAGACTATCTGCTCAGAAGGTGTC
CACTTACTATTCTGGCGTTTCTCTGTTGGGGAGCCACACACTACCTGCTTCTGCTCAGCCATCTTGATCCCTTTCATGT
CTCTATTTATGAAGGATGAAAATGGAATGGAGACATGGAGATTGAGGATTGATGATGAGGCTTGTTGAAATTTGATGAT
AATTTCACTAAGAAACTTAGAAACAGGGCCAGGGGGTAATAAATGAGAGACACAAAGAGAATGGAGTAAGTAGATATGA
TGGACTTGCAAAGAAAAAACCTTGTTGAAGAGCAGACGTGAGCTAATGGACTAAGAGAAGCATGCAAGTGGGGAGACTA
CTTCTGATAGTAAACATTTTGGAAGAGTGTGCCATCAGGAGAAAGCCCGACTTCAGTGTGGTCAAGGAGCTGAGCAAGT
TATATCCAGAAGTGATCAAGGATATTTGTGAGTTTGCTTACAATATCATAAAGGCAGGACAAGACTCAAGGAAGATTCC
TAGGGAGGAAACTGGTGGGGAAGTCAAGGCCAAACTGGGCTGGATAAGGTAGAAAGAGCATATTGATGAAAATAACAGC
CTTAGGTGGGAATTGTAGGGGGTAACTTGAAGGGGATTTGAATACAGGAGCCTGTGTTAAAAACTAGCTTTTTCTTTTC
TTGCTTTTTTTCTTAGAAATGTATAGAACACATCCATTTATTCCAACACTCCAAGTGAGGAATAAGGTTTGGGCTCAGC
TTGTAGTCCGCACCAATCACTGAGTATTATTTTGAGGGGCATGTTTACGGGGAAGGTACGTTGCTGGTGGGATTGTTTC
AAAGTCTTAATGCAAGTGCCTCAGGTCTATTGCTAGACATTTAGAATTTTCTTGGTTTTTTGAAAGAGAAAGATTAGGG
ATAGTTAATAGTAGTTTAAAAGACTGTGCAACCTTAGTAACATTTCTTTGCAATAATTAATTAAAATCACAAGGAAAAT
TTTTGCAAAAGTTTGGGCATATAAAATAAATGAAAGTTATGACTAACAGTTCAACTTTCTCCTGATGTCTCACTTTTGT
GAGAACTGATGTAGACCAGAAAATAAATTTCTAGGTGTTTTTTGTTTGTTTGTTTGTTTTGTTTTGTTTTGTTTGCTTA
GGTTGACAGATCTAATTTTCATGTCAAATTAGGACACTGACTTTCCCTAACAGATGTTCAGGAGCTGAATTTGTATCCT
AATTCTAGTCTTGCTAGTATTTATTTTTGAGACCTGCAATCCATCATTATACTAACATGGCAATGCCTAGGAAGTTTAA
TGGCTATACGACTTCTAGAAAGTGCCTTTATTACATATCTGACACATTGCAAATTCACAAGTGGAGTACAAACAATTTC
AGCAGCTTAGATGACATTTTCCTTCCTGCCAGTGGTCTGAACTCACCAGGTAGCAACACCCAAAGCATTACATTCTGTC
TCCCTGAGTTGCATTGTATTTTTGATATCACAGCATAAACTGTCAAAGGAAGTATTTCTCTAATTTTAATTGGGGTTAC
TAGGGTCAAAGCCAAGTTTCCAAAGCTCATTTTGTTTTTATCTTATTATCATGCATTTATAGTAAGCCATTTATTTTTT
GAAGCAATCCTTATTATAACTTGGAAAAAAACTATTTCGTAATGTGGTCAGATGTGATTAGATCACTGTTTTATGCTCA
GACGTATGTTCCACCTTTTCCCATAATGCTGTGACATTTGGGGTTTGTATAGCTTCATGAATCGAACTTAAACAGTAAT
GCATTTTCACAAATAAATAGAATCACTCTTCCTACCTATTATGATGGATCTTAAAATATCCTGCCACATCTCTCTCGTT
ATTCATTCAGTTTCTGATCTTAGTAATTTACCTATACATTAAAACATTGTAATTATGTATTTAAATCACCAGGACACCT
ATCATTTGGTCTCTAAAACTGAGTTGCTGGTTGTTAGAGAAAAATGTATTTAACTTGTATTTATGAATATAACTGGATG
AGATTCTGGTTATTTAATAGGCAGTTTAACTTGAGAAACAGAGTAGATGGGAAAAATGAGAACTTACTGTGCTTTAACA
ACTTTACATTAATTTGTTGGTTCATTGTGAGCTAGTTTATTACAGTATATTGAACTGTTTACCAAATAGTAAACTCGAT
TCCAGTGTTTAGAACATGCTTTTTTAAAATGACATTCTTAACCATTTTGCCTTATTGCAAGGCATTTACGTATATACAT
TGAGAAGCTGTATCTGATCATGTTTCTGCAGAGATGTGTTATGAACTGCTTTAGTACACGGATTTTTGAATCTTAACAA

Fig. 9.236

AGGATTTTGGCCACCTGCAAAATAAGAGGTTTTCATTCTTTTTAGAATAGTCTTTTTTCTGGGTCCCCAGTGTATATTT
TGCCAAAATGCCTAAAATATTGCAATAAAAAAACTCAGAGTTTGGTACCAATCTGACAATTAATTTTTTTAAGCCTTTA
AAAGTATATAAACAATTTTAGCCAATGGACACCTCTCACTGAATTGACCATATAGATCATATTAGTCCATTTTCACACT
GCTGATAAAGACACCCTTGACACTAGGAAGAAAAAGAGGTTTAAGGGACTCAGTTCCACATGGCTGGGGAGACCTCACA
ATCATGGCAAAAGGCAAGGAGGAGCAAGTCGCGTCTTATATGGATGGTGGCAGGCAAAAAGAGAGAGCTTGTGCAGGGG
AACTCCTCTTTATAAAACCATCAGATCTTGTGAGACTTATTCACTATCATGAGAACAGCACGAGAAAGACCCACCCCAT
AATTCGATTGCCTCCCAGGACACATGGGAATTGTGGGAGCTACAATCCAAGATGAGATTTGGGTGGGACACAGCCTAA
ACATATAATAGACCTATCAGTTCCCTACACTAATAAACTTCCCTGGTATTATTTCCACAGCACATGTACCCTGGAAAAT
TAGCTCCAGGTGATGAGAAATTCAGTTGAGGGCAGTAAAAAAGAAACCAGGTATTCTCACACTAATTTGAGGGTTTAAT
CTCACTGGGCCTCCTGTTTGTTTTTAGTGCATTGGAGGAAAATTAGATTTTCTGAGTAAATAGAAATGAGCAATGTTCC
TATGTATATACACTTAACTCTTCAAAAAGAACAACATAGGTCTGTACTGGCACAAGTAAAATGTTGTAGAAATTGGGTC
AGGTGCCAAGTGTGAGCAACCTCACTCTCCCTAATCAGACAGCATTTCTTATATTATTTCTGGATTAATATAAGTAGGT
AATCTTGAATAAATTCTCTAGTGAATGTTCTACATCATTTATTGTCAGTGAATGTACAGATGGGATAGTCCCAGTAAAT
TTTTTTAGAAAACCAAACCATGTTCAGGATCATGGATACTTGTATTCAAGGTTTTCATGGGCATTCAAGGAAGAAAGAG
GTGATGCAACATGCCGTAAGCCAGATTCTCTAGAAAACAGACTTGGAGGCAGAGATTTAGGCCCAAGAAATTTGTTTGG
GGGTGGGGTTCTCTTAAGATCAACACCTGTGTGCAGTAGATTTCTCTCTCTTTGGATAAAGGCAATTCCAGGAGAGAGA
CTTAGCTGAGAAGACTCCCAGCTGCTGGGGGAATGAATGCCTCAATCCTGAATGGGTATCTGGGTTGCATATTTGAGCA
AAACATCCTAACTTTAGTAAATAAAGCTACAGCTTTTTCTTATTTCTCCTATCTGCTTCTTGCCTGGGCAACCTAAAAT
TTATCCATTATCCCTGCTATCTCACCAGGAAGAGTATAGCGATAAAGAGCAATTTCTATATCTTATACATTATATTTAA
CTATAACATTTATTGTTATTAGATAGTTAGATTAAGTAAGAAATAAGGTATTCATGATTCTTTTGAATCTGTGTGAATA
TACATATAGTTAAATAGTGACATTGAAAGTATGGTGAATTTTTATATCATCTTTCTGGAGAAATACTGAGGAAAATACT
TGAATTTTGCATAACCAAGGCATCAGTTACTATTCACAATGAGACTACAGAGAAAGCTTTCCAAAATGTTTAAATGAAA
TATGCTTTCAATGTTATGTGGTTTTCCTGTGATGTAGCTACTTAATTAGCATTGTATCAATCACCACTGACATCAAATA
TGATAACTTGCTTTACTGGAAAGTCACTGCTCAATCTCATGAATGAAATTGATGAGGTAGAAGGTAATGGTGCATTGCC
AAGAAAACAAGAAAGAAGGGAGCTAAAAATTGAGAGTTACCTACTTTGCAGTATCTGCTTTATATATGGTATCTGATTT
CAGTTTATCTGAACCCTCCCCTGGAAGTAGCTATTATCAACTTTATGTTATTTACTTACTCATTTTATTCTTTTTAAAA
AGAATAATGAGATGTTTTAAACATAGAGAAAAGTGCACAGGGCAATATAAAATCACATACATAATCATCTCCCAAGAGT
AACTAATGTCATTATAGGTAAAGTTTGCTTCATATCATTTTAAATATAAATATTGCAGATATGCTTGAAATATATGTTA
GGCCATATGTGTTCAAGCTGAGGAAAGGTAGGTTCAGAGAGAAATAATCTTGGCCAATCTCACTCTGCTAGTAAGTAGG
GCTAAGATTTGATCGTCTATACGTGGATCGTGGAACTCATGTTCTTTCCCTCCACTATGTATACTTCCTCTGTACTCCC
TGAAGACTTAATCTGGATAGAGATACATTGCCTAGAGTTTCTCTATAGTGGGAGAAATGAGCCTTTTACTTTCGTGGTA
CCACGTCAGTTGCCAATTGATTCTGGCACATAAAAATGTATTATATCTTTACCTGTTTAATTATTTTCTGTACCACATC
AAAGGAACAAGATAAATTTGGTTATAATAGTTTATTTTACTTTAATTTACTATTATTAGTCATTGCAGTACACAAATGC
AGATGTCTGAAGGGATGCACAAAGATGACAAATGAGGCATGTAACATATAAAGAAATACTACATTTCTAAGTGGTTTAC
ATTATGTGTATGAACATGAATTACCTGCATGGATTATTTTTAAGTTCAGAAACTGTTTTTAGTTGGTTTTCTTTCTTTT
CTATAGCTGTTATTTATGTCTCCAGCTTCATCTTCAAAGTGGAGATCATAATATTTATCTCATAAGACTCTTAAAAAAT
GAGATAAAAGCATTTGATGAAAGCATATGAAAGCATTTGACTGAGCAATTAGTATAAAGAAGCTACTTAGTACTTATTT
GCTATGGTCACCTGAAAAGAAAAGCTATTTTGCATGCAGTGGTAGGGTTGAGAAACAGCCAATATATTAAATATTTTAA
AATATTTTTGTTTAAGTTCAACCACCTACTTTTTAGAAAATCACTTAGCATATGAAATTTATTTTAAGAGGATACTTAC
TCCACAGTTGCTTTAGAAGAAAGAAAAAGAAAATCAGTTTGTAAAATGAGATAATTGTAAGGGTATCTCATCTTTGTAG
CCATATGAGAGAGTCCAAAGAGCTAAGCAAATATTTGCGAAATGATATTTTTACTATACTGGAAGTAATAAACAATTAA
AATGTTGTTATTAAGGCAGTGCTGATATTATAATTTTACTATCTCTAGAGGAATACCAGAGATCTTATTAAACACATGC
TTTTTTAAAGTTGAAATCTTAGATAACTATTATCATTACTATATGTGTAAGAAAACAACGGCATGGAGAAAGATGTGCT
CTATAGAAAACTGGTAGGTTATTAAAATATAAAGAAATAGGGAGAAAACTGAAAATTGCATGATATTGTCAAGTCTCCC
TTGGGACTCACCCACACAACAGTTCTTTCATTGCAAGTTTCTTTTTTCCTTAATGAGTCATTTTGAGTTCTTTTTAATG
TGGGCACAAGGAAACAAATAAGGATTCTTCCATGCAGCTAAGGCACCCCAAATCTTATTAATTCAAATGTTGAGAGCAT
TGAAGCCATAAAGACAATAAGAATACTGAAACACCATGTATCTGCTTTCATTTAAATAGCCAAACAATTCTGTATTTTC
CAAGTGGGCTTCCTTAATATACATATTTTAAACCTTGTAAGGTAATTCTCCAGAGAAATATGGAGGTCTAAAAGACAAA
GTAATTCCATTTATCACCTTAAATCTCATTTAATTAGGGAATAATTCTGATATATCAAGAAAGAAACTAATTACTGTCT
TCTAGATGCTTGTGCTTTTGTAAGAAACAAAAGAGCTCAAGCAAGTAGAAGCCTCAGGAAGAGAGCAGTATTACAGAGG
GACCACAGCAACAATGTTTTTTTTTGTTTTTTTTGTTTTTTTTTTTTGAGATGGAGTCTCACTCTGTCGCCAGGCTAGA
GTGCAGTGGTGTGATCTTGGCTCACTGCAACCTCTGCCTCCAGGGTTCAAGCGATTCTCCTGCCTCAGCCTCCTGAGTA
CTACCACACTCAGCTAATTTTTGTATTTTTAGTAGAGATGGGGTTTCACCATATTGTCCAGGATGGTCTCTATCTCTTG
ACCGCGTGATCCGCCCTCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCGTCACGCCTGGCCAACAATCCTT
ATTAATATTAAAATTTAAAAATTGGCTTGAACTGGAGAACACTTCAAAGCTCATTTACCACAGAACTTTGTCATTTTTC
TCCTTATTTGACTCATCTCAGTTGGAAAGCACAGATGTTTTATGCGTCTGCCTTGCTCCCACTCTCCCTAAAATTTTAC
TTACCAGCTAAACCGCCAATCCTAATACATCCAACAATATTTTACCATGAAAATACATTCAATTTTTGTATTTAGATGC
ATACAAGTCTCCTGAAATTGTGAAATATTCCAACTGTACTTGGAAAGCTCTCTGAAGATCCCCCCCTCAAAAAAAAAAA
AAAGAAGATTATCTCTAGTGGTTATATTTTTTGAAAGGTTTATTGTTCTATTGAATATATATCTAGTTCTTTTTCATAA
AAATGAATATCCTGGCTTTAAGTAACTGTTTGCTAAGCACAGTGTGCACAGCTATGCACACACTGATATCACCATTGCC
AATTTTATTAAAAGAACCACAATACAGAGCAAAGAGAAAAAGAGAAGTGTCCCTATTAATGGTATTTCAAATGCGTATT

Fig. 9.237

TAAACAGCTTATCTACTCCAAACTAATTTCTGATAGATTAAATAGCTGTATTCCAAATCTTACAAGATGCACATCTCTC
CTCTATTTCTTTCTCGGCTTGCTTCAGCTGAATAGCTCAAATTGTTTGGCACTGGTAAAGCATGAAAATGTGAGATAAA
AAAGGAAACGAAGCTACAGCCTGAGTGGCCTACAGGCCTTAGAAATGGCAACACTTTAAAATTCATTATATTTTACATT
GCTTCAACAGTTACACATTTTTTTTTTTTTTTTTTTTGGCTCTTGATGATGTCAGAAGATTTATCTGGGATGTCTGT
CTCCACGGGTAAATAGTGACCGGGGTGAAAACTGAGGGAACTAGGGAGCACCTAGACCCCAAGCCTTAGTAGTCAGCTC
TGGAATGCTCCCTGCAGTGTGGGGTGTGAGTGTGGTGTCTCTGTGTCTCTGTGTACACACTGTGTGTCTGATGTGCAGA
GGGGAAGGCAGGGAAGAAATACTATGGCAGACAGTCACTTGTGGTAGCTCTCTAAAGGGATCTGGCACTTCCTGCCATT
TCATGGAAAAGAGGAATGAGAAGGAAATAAGCATTTGTTACATGCGGGATCTCACTGGATGCTTTCAGTGCTAGAAGGG
AGCTATTTCTCCTCCTAACGTCTGTAACTCACCAGATTTCACTAATTCAGAGGTTGCTTTGAAACTCAGAGTCAAATTC
ATAGCCAGGGACTAAGTCTTCATGATGTGCCTTTTTGTTTTAGCCTCCTTTCCGGCATGTTTTTTGTGTTGCTCTCCTT
CCTGATTACTTTTTATTAGTGCTATCTTAGTTTATGTATTTTTATAAACTGCCTTAAATGCTTTCTGGAACCACTGTGC
ATTTAATCAAATAGACTAATAACTAACTAGGAAAATGATAGGGCTGATAGCATCGTCTGACCCATGAGGAAGCTGAATT
TAAGTAGCTTGTCCAAGGTCACTCAGCAAGTCCCTTGTGCTGTGAGTCTGGTTCTTGGCTTTCAGTCAGTATTTTCAAG
TTTTACCTACTTATTTCCTCTTAACTGAACACGAAAAAAACCTCAAATGCTTATTTCTTTAGCTATTTCTATTTCTCTG
CAGTTAATGTCCTATCAACTTGAAATTCCTCCCCTGCCTTTCACTCCCAGTAGAAGTTTCGCTCACCTTTCCCAGGATG
CTTGAAATACCTTCTCATGAAGCATTTCTTATCCTGAAAAAGCATCATTGTTACATCTCTTCTTAGACGCTCCTTTGCC
TTCTGTTTTCAATCTAGAAATTTGTTTCTCCCCCATCTCCATACTGACTAGGATTTTGTTTGCTTGTTTCAGTTTAGAT
CACAGGTGTTAAAAAGATGATCTTACATATTTAAATGATGGACATATGATTCCTATTATCTTCTACTTCTATGCATTCC
TGATAGACAACTCTTAGGCTGGAAACTAAAACAAGAAGGCCTATTAACTATTTTGCAAAATAAAATTGTATTCTTAAA
GTTAAGTTCTTGATGCAGGGAGAAAACATTTTATGATTTTCATTTTACTTCCCACAATAATACAAGCATGTCAAGTATT
GACCTACAATAAATGCTTAATAAAAACCTAGTATTTTTCAGTCACTTTAACAGGGCATTGTATATTTAATGCATTAACG
CTCCATAGGCCATGTCTCCTATGTACTTTGTATGCTCAGAAAGGGAAGTAATGTACACTGGTGGTTAAGAACATATTAA
CCTGAGTACATCTTTAAACCTCAGCTCCACTCCTTGCATGTTGTATGACATTGGCGAGTCATTTAACAGCTATGGGTCT
ACATTTCTTCACCTGTAAAATGGGGATAATAATAATGTCTATTTAATAAATGTATTGTGATAGTTAACTGAAATAAAAC
ATGTATAAAGCATGCAATAGGGCACATGGGAAGTATTTTATAAGTGTTGTATGTTATTATTAACCTGTAAAGAATTCAT
ACAAGAAGGCACAGAAAAACATCAATTGCAACTAAGATGAAAAGTTTGTTGCTGTTAGAGCAGGAGTAGTTAAGATGGT
ATGTATTTCAAATATCCAAAAGCTTCTTCTATTTCTGGAGAGCAACCATGGGAAGTCTATTGTGGCATTAGATAGTGCC
ACAGAGAAAAGACAACAGGATGGTGAGGACAGGAGTTGGGAGGGTGGAGCCAAGGAATCAAATAATGTGGTTTCCTAGA
TGACATTCTTTTCAGAAGCCCAGAGGTGCCACATCTATTACAAAGTCTCTAACCAAACCATATCCATGAACCTATACAA
GATAAATTTTAACAGAGTGCAGATTGTCTTTCACTCTACATCAAACTATAGAGTCCAGAAAAAAATATTTTATATCATGA
TAGTGATAATAATTGAAGGAATCAGAAGGAGTTGATCATTCTCTACAAGCTTGTTGTCATGAGGAGGGAGGTGAAAAGC
ATTAAAAAAAAGCTTAAACCCTTTTCCCAATATTTCAAAGTAGCTTTGATGGTATTTAGATAGCAAACTCATTTTAAAG
AGAATAGGATTTTCACAAAACGGAAAAATCAAGCAGCTGGCATAGTAAGTTATCTGAATTTGATCTGAATTGACGTCAG
GGAGCTGGGAATGCCCCTGGCAATCCTGCATTCTCTCTCTTTGTGCAGTATTTTGACAGTAGTGAGAATGTCTGAGTGT
TAATCATTTTCTGACAGTGTAGGCTCTAATCTTATGCAAAATGAAAGCATTTAGAGATTTTACCTTCTTGGTTCCAATC
AGGGCATTTCTTCTAGAAAAACTATTCTGCAGTAAGATTGTGTATAACTTATTTTACATTTGTATATGTTTATATATAT
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AGAGAGTTTATTTTGTAAAACCTTACTGGTAGAGACATAAATCTAAAAAACAAAATTCAATCCAGACTTTTGTATCCAA
ATATGAATGTTAATTTCCTGGGTATATCTTTTTTTAAAAACTTGCAGTGTGGGTATATAAGCAGGGCCAGATGTCTCTG
TGTTAATCATTTCTACTCTTTAATAAATAACGGTGGCGTACAGTGAAAATAAAGCCCAGATGGCTGACACATTGCACAA
ATCACTGGATGCACTGTATATTCATTTCATAGTTTCCTGAATACTAATAGATGATAGAGTCATCATCTTTTTATCTGTT
CCTCAGTCAAATAACAAGTAACTACTTACTGTGTCTTCTAAAAGCCACTGTGCTAGTGGCTAGGTAGGTTATAAAAACC
CACCAGATATTGCAGATAGTACCACAATATAATTTGCTTTAATCTCTATGACCTTCAGAATCTATTACATCCTAGTCTT
CCCTAGGAGACTGGGGTTTCTTGGAATTATTTTAAAAAAGTGATCCAAAACTGGATCTGATTTTGCCATGGGGATTGCT
TAACTAATTGGTTTATTAGCTTGAGTCTCATGCATCATGGTGGATATTACTGGTTGTCAAGTTGTGGTTGGTGAATCGT
AGACTTTTAGAACTCTCAGAGAAATTCAGAGTTGACCCACATTACATTTTACAGATGAGAAAATGTGAAACAAATGACT
AAATGGTTTCACTAGAGCCAGACAGTTACTGTCAGAATTGAAGCTTAAACTACAGGCTGCTAACTTGTAGTCTGCAGCT
TTTGCTAGTATGTATGTTACTTTGTCTCAGAAATGTAGTGAAATTAAATGTAGTGAGATTAAAATCGGTATCACAGGAA
TGAAGGTGCAGTAACTTTGGGTTTGCTGCTGCCATTGACTCAGGGTGGGATGAAAGAAGGGGAACGGACATCATTGCAC
CTGCTTCATTTGTTTGTTCTAGAAGGAAAATAAGGAAATGAGGTCTGGCTCCACACAGTGTTTCAGTGGGGGCTTTAAC
TGGTCTAGATTATCTAGAATTTTTCAATATACAGAACTTAATAGGCACAGACACTCAAATGATAGGGGAGTCAAGTATT
CACAAAGATATGACATTTACAGAGCCAGTCTGCAAAGATAAAGATATGCTAAGTGGTTGTCTGTAGACAATTATAGTCC
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AGACCCTAGTGGAATTCCCCAGGGATGTTTTACATAGTTGGGATTCTCAGTAGTTGATGATATTGGGAAGCAGAACATA
ACCAGAGGAGCTGGGAGTCAGCCCTGCCCAGGTGGGGCCCAAGCAAAAACCATACTCTGCCTTTCCCCAAGTCACAATA
AATTGTGTTCTGCTAAGTTGTAGTTACACTGTCTCTTCAAACAGAGACCATAATAATCTTTGCTGCATTTATTCAGTTT
TATGTTTATGCTAGTGATGTTTGTCACTTAGTTAAAATTAGCTTTAATATGGAAGAAGAGGGTATACCTCTTTCTGGAA
ATGTAACACTCAGCCTTAAAGGTAAAGGGAGCAGCAAAGGTGTCCCTAAAAAGCAACTTGCATCCTGAGCACTGTGTGG
ATAGAGGCCACTGTTGCCAGACATCCAGCCTTAGCAGGTTGCAGCCTTAGCAGGTTGTGCTGTCTTTGTATGTGGTCAT
TTTGGTACCATCCAGAACCCCCACTTACTCTCCTGCTCCTCCACCACCACCTCCAGTCCCTGGTTGCAATGAGCCACAC

Fig. 9.238

AAAACAGAGGAAAGTAAACGGGCATTACCTTAGTATCAGCAATGCTGGGATATAGTTCTGCTGGTAGCTCCTCCTAAAA
ATACACCCCTAAAAAATAAAATTGTAAGAAAAAAAGAGTTAAAAATAAAAAGTTTCAGTCTCCTTGCCCTGGGCAGGTC
CTTGGAACTGTAGAGGATTTTAAAGGCTATGAAAATTATTTTTTATGGAATTCCAGAGAGGGGGATGGGCTCAAGTTTA
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GTAGGAGAGTAACCGCTTTCCTCAGTCTACCAGTTCAAATGTTACTCTTATCCAAAAACACCCTCACACACATACCCCA
GATGATGTTAATTAAATATCTGGGCACCCAGTGACCCAGTCAAATTGACACATAAAATCAATCATCCCACCATGTATAT
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AACAAGGGCGAATCACCTTTTTCCTTTTATTTCTTTGACTTCTGTTGAATATTTTTTATGAAAAATCTTGAATTTCTAA
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TTTACAACTGTAAAAGAAGGTCATTTTAAAGGCAGTATTTAAAAGAACAATGCCACAATAAGTGGCTCTTCTCATTGCC
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CCCATTTTAGAGATGAAGCAGGTGAGTCTCAGAGAAGTGAATGATATATTCAGGACATATGGCTAAGGGGTGACCAACT
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AGCCTTCAGGAACATTCTGCTGTGCAAGTGGTCACCAAGTTCATGTGCATGACACTGCCCTGGTCATTGCTGTCCTGGT
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GGCACACAGTAACTGCTCAATAAATGAATGAGTGAACAGAAACCTATTAATTGGATCAAGTAAAAAGAGACTTATTGGA
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TGAATGAAGGGAAGCAGAAGCACTCTTGAGTGGTCTGGGTTGGACCAGAACCTGGGTGTTGGGTGGTAGTGGGAAATAG
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GCTAGTAAGGGTAGACTGTGGATGTAGTACAGTAGCTACTTAAAAGCTGTTATGTCATGAGCCTCCCAACCATGACGGT
GCTTAGGAACTCTCCAGGGAGCATTGTAAAGTATGCAAAAGTCCTGGAAACTCTAGGCCAAGTGATTTAGAATCTCTGA
GCATGGGGCCTGAGCATCAGTATTTTTAAGAAACTCCCCAGGTAATTGTAATATGAAGCTAGGACCCAAACCATCAATA
GCAACTCTGAGTAGATGCCTTTGCCTTGTGCACTGAATACTTTTGTCATGTTAACAATGCTTTTTTGTCATATTTTATG
ACGTGTTTCTTGTGTATCACCCAAAAGCAACAGATATTTTTGAATAACAGAGGTTACTATGAGCATACAGTTATGCACA
TCATTGAACCTCAAATTTTAAGATACTTATTACTAAAATGTTATACTGTGATTTATTGAAAATTTTATGAAGAATTCAT
TGACAGGAGCAGGTTATATGTTAAGTGCTACTTTTCTAGTTGAATGTGGCTCAGGAGAAATCTAGTTAACTAAGTCAAA

Fig. 9.239

TAGATAGTTTTTAATACTTATATTTATTTAAATAGTAGACTTCCATAATCCTCAGTTATTTTATGTCTTCCAAAACCAA
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AGTGTCTGTGGTATGTAATTGATGAACTGTTTTCTAAAAGGATTTTGAACGTTTAGAAAACTAATTAAGATATTTAAAT
TATTGACAAATAGAGGATCTTTCTGTACCCAATTTAAAAAGAAGATACAATGATTTGTGGTTAGTGTATCCATTTTTCA
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TTCTGAATTAAGTCTAGATGTTTACAATCTATCTGAAAAAAGTAATGTTGTTATAAACCTCAAATCCGTGCTCATACAA
ATTCTTACCATTTCCAATTAGATAATACTCTGGCAAGAATTACTAATGCCTGAAAAAATAGATGTAAATATTCCCATAT
GATGGTAATTATTAAATGTTATCAACTAAGTATAGTGTTTTGTTTTAATTTTAACTTTTATTTTAGATACAGGGGGCAC
ATGTGCAGGTTTGTTACATGGGTATATTGTATGATGCTGAGATTTGGAGTATGGACTCTGTCACCCAGATAGTGAGCAT
AGCATCCAATAAGTAGTTTTCCCACCCAAACTCTCCTCCCTCCCTTCCCCTTCTAGTAGTCTGCAGTATCTGTTGTTCC
CATGTTTCCGTCCATGTGTACTCGGTGTTTAGCTCCCACTTACAAGTGAGAGCGTGTGGTATTTGGTTTTATGTTCCAG
CATTAATTTGCTTAGGATTATGGCCTCCAGTTGCATCCATGTTGCTGCAGAGGACATGATTTTGCTCTTTTTTATGGCT
GCATAGTATTTCATGGTGTATTTGTACCACATTTTCTTTATCCAAACCACCACTGATAGGGTGGGTTTCATGTCTTTGC
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CTGAAGTAATTTACATGTCCACCAACAGCGTATAAGCAGTCAATTTCCTCCACAATCCTGCCAGTATCTGTTGTTTTTT
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CGTGCTGTAATGCTATTAATAAGTGTAGTTTGCAAGCAATGTTTCAAAATTTTGTCTACTTAAAATTTAGAACAGGATA
TTTATTTTGTAATTTTTGGATAGATAGAAAATCTCCTTTCTGCCATCATGAAACTGATAAATGAGTTATAGGGATGGGA
GGAGATGGACATTTGACCACATGCAATGCAGTTTTCCAAAGTATATAACCATAATCTATATTAAAGGTAAATGCAGTGT
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ACATAATCATGCCTTAAGAACCTTGCTTTCTGTCTTTGAGTGACATGCTTGGAAAAGTTTTTGAAAACATCAGTTTGTG
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CTTGGGGACATTGAGGCATACAGCAGTCAACAAGCCTGAGCCCTACAACGACTGAGTCTGGAAAGTTTAGATTCTGAAA
GCCTAAAAAAGCACTGTGTAAGAGGCTAAGCCAACCTTTTTGTTGTTGTTAATCTTTTTACTGGGAGACAAGAATGGAC
CTTAGGGATAGGGTAAAAAACTGAGAGCCCCCAGCCCCTTTAAGATATTTTCTCTAAACCTCTTAAAGTTAACTCTGAT
TAATTTCTTGGTTAGAATTCAAGTTATGGTTCCTGCTCTGCAAAACTAATAGGTAGTTTAAGGTGGAAAAGTAAAAAT
TCTTGCCATCTCCTACATTGACTTGAGAGTGAAAGTAAGACTACAGATTTGTTATCCCCAAGACAGTTGTAGAAAACTG
AGATTATGCTTTATAATACCCTATTTCAAGTGGGGTTAATATATAACCATGGTTCTTAGCCTTATTTGGGGTTAGAGAC
CCCTTTGAGAATCTGAATAAAGCTATATGTCTTCTCTGAAAGGTGTACCTAGGTACACATAATTTAGCCACTGGCCTTG
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AACGGTTGCCAGTGGAAATAATCCAGGAGTGATAGAAGTATGGTCCTTATTACAGTTATCTAGGAAGGAGACCACACTG
TCTTCATCCTTTACCCTTCCTTGGTTTCACCTTCTTCCTTCATGACTTGAAGATTCCTTTATTTTCTCTTACTTCCAAC
TCAAAATTATATTGGTTCATGCTGGTTTCCTTTGTTTAACAGAAATATTCCTTTTGCAAAATGGTAAACACCTTTTTAG
GGGGAAAAAAAAACCCAACCAACACTGTTCCTACAGTTGTAGATAGTAATTAAGTCAAACCCTTAGTTGGTTTTCATTTT
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TTTCTTGTTCTCTTCATACATACCCAAGAGGGATTGGCAAGAGGCTCTACTTATTGTAGTAAACCTGGGACCCAAGATG
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CACCTAGAAGTGACACATACCACTTTTGCTTAAAATAATTGGTCAAAGTATATCCCATGTTCATGTAGGATACCAAAGG
GGAGGCTAAGGGCAATCTTACCATGTGACCAGAAAAAGGAAAGCTAGAAGTATTTGGTAGACACATTCACTCTTTTCTG
TACTCCTTTCCAAATTCTCCTAACTTTTGGAGATTTGATTGATGTTAAGCAGAAAAAGAGGGTTTGAGTCTTATTTTT
GGTGAAAGAAAATATTCTTGGTTAACTTTGTCATATAATATATCTGAACTTAAAATAAGTACACAGTGGCATATAATGA
ACTTAAAAGAAATAAAATACTAGCAGGAATGTAAAAAACCTGAACATAACACTGAATTGCTCTTGTTAGTGTTATGCCA
CTTAGTTCCATCTACAGTCTAGCCCTTGTAATAACACACACACCGTGATTTTAGTTAAATAGGAACATGCCCCTTTCTG
TTTCATTTAAAATTCTAGTCAACACAAATTCTTCTAGAAAAATGAATTAAGAATGAGTACTATTCCCAGAGTACATTCT

Fig. 9.240

GGTTTGTCTATAAATTCTAAGCTAAGCTTTATATGGGAACTGTCAAAGGCACAGTTGCAATGTTGCTGCCTTTTTTATT
CAGGAGAACTGACTTCTGTTGTCCCACTTGGACTGATATGTTGAGTGATGAAAAGCTGGGCAAATCTCCTCAGTCACTT
TCTTCTGATAGTTTACTTTATGGCTTCCTTAGTGGTCTGCATCATTCTTTCAGCCTGACCATTTGCTTGAGGGTGATGA
AGAGTAATGATGACAGGTTAGATGAGCTCTAGCTTCACAAATTTCTTAAATGCATCTGAAACAAATGCAGATTCATTGT
CAGGAATAATAACATCTGGGAATCTGGACATTGAAAATCATTGGTACAGGGATGTTCTTGTTGAAGTAGAGACACTATA
AGGCATTTTGAGATGGTAGCCACAACAAACAAGAAATTCTCCTCCTTGAAAAATAAAAGAATTATTGATCAAATCTTCC
TGATCATTTTTTATAGGAAGGAAAAGTACCTTTGGTGGATTATATGGAGTGGCTTGGTGTTGTCTACAGTCTTCTAAAT
GACATAATTAAGTACAGGCTTTAGATATAATTATTAGTGTATATATCATTTTAAAATTCCCAGGTGAATTGTAAACATT
ATTGTAATAATGTGATAAGTTATGTGATTTCTCTATTCTGGCCACTCGAAATTAAGAATTAAAGCTTTGATTAGAAATT
AGAGTCTAAACTATATATTTGAGAGGCATTAGTATAGTTGAAACTATGAGAGTATTTTGGTTTACTGAGCTAGTTTATG
TGAGAAAGCAAAAGACCTGAAACAGTCTTTTTTCAGTATGTATTGTATTCTAGACTTTTTTCTAGGTCATTCTTTCTTT
CCATATTTTCTCTTTTTTTTTTTTTTTTTTTTTCATGAGAAAGCAGAATGATTCAAACTGGGTATAACTATATTAAAGGC
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ATCAGTCTTTGCGTATAAAGAGCGCTATGCAAGTTGGCTTCCAGTCATACGAATATGTGGTATGATTTCAAATAAGATT
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ACAAAGTATGCTTCATTTGACTTTAATAAAATATTATATTTCCAAGACCGTATGTAGTAATAGCAGAAGGTGTGATTTC
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GCCTCTGGTAGGGCTATTTATGTCATATCCATAATTGTTATATATTAACCATTTGAATGTGGAATAAGGCAAGTACAGT
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TGCTAGACAAAGGCCACAGTTAAAGCCAAACTGCTTGACACTTTATATTCTTCAGGCCTTTTTAACGACCTTCCCTTTG
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AAACTCTGTGTGCAGACTGGTGCCCAGCTAACCACATAAAATTTACCAGGGGTGCTTATTAAAAATGGAAATTCCAAAA
TCTTACCTCCAGAGATGCTATCTTGGTGGGCCCTGAGAACATCATGTTTTTGACGAAGTCGCCCAATGCCTTTCTGGCG
TGGTCAAAAGCAAGAAGCACAATGCCTTTTTGTGCTTCTTGGTTTTGACCAAGTCACCCAGATGATTGTGGTGCAATGC
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ACAGATGGCACATTGATGAAAACTACTGATGTTTGCCACTTATTATTTATTCTTTTTTCCTAAATATTTACAAAAATTA
CTTTTCTCTTTTGTATGCCACATCTGACTATGTGTGTTAGTTTTTGTTTTTTGTTTGTTTGTTTGTTTGTTTTTTGAGA
TGGAGTCTCACTCTGTCAACCAGGCTGGAGTGCGGTGGCGTGATCTCAGCTCACTGCAAGGTCCGTCTCCTTGGTTCAT
GCCATTCTCCTGCCTCAACCTCCCAAGTAGCTGGGACTACAGGCACCCGCTACCACGCCCTGCTAATTTTTTTGTATTT

Fig. 9.241

TTAGTAGAGACAGAGTTTCACTGTGTTAGCCAGGACGGTCTCGATCTCCTGACCTCGTGATCCACCCACCTCTGCCTCC
CAAAGTGCTGGGATTACAAGCATGAGCCACCGCACCTGGCCGTGTGTTAGTTTTTATATCTATGTTAGTACCGCAAAAA
TGTCTAAGAAAGCAGACCCTTCTACCAACACTACAATGTCTCATATTGCAGGAGGCCTCATAGTTAGGAAGACAACTGT
TAGCAAAGCCCTTGTTTCTCTCATGAGCCACCAGTGTCTGGCATATCTCAATGCACTCTTCATGATGCTCTAAGCTCTA
AGTTAGGCCTATGGTTGCATTGAAGCTCTAAGTTAGGCCTATGATTAAAGTCTTCTGGCTCATAATGATAAAAGCCATT
ATTGTAGGCAGTTAGAACCTGTTGAAGGACAGAGACGTGATGGATTACAGTCTGAGATAATGTAAGTTGTTTAAAAAAG
TGAAAATAAAAGAAAATCAAAACTTTGCTTTACCTATTCATTTTTAAAATAACCAAGGCATACCCCTTTTGCTGTCTTA
AGTTTCAGACAAGGGTGCAACTTCTACAGTCATTCCTTGGTGGCTTTACATGCTTTATTTGCCATGGGCCATTAGGTGC
TATGGGTGTTTTCATCCCCACTTTGGTGCTTTGTCAAGACATCAAGCATCTCCATGAATATACTTTAATCTTTCCCTTT
TTTGTGTTTTGTTTTTTAGGTAAGTACTTTTGGTATTCTTCTTCCTTAATGCTGAAAGAAAATGCAGCTGCCTGATGTA
GAACAAATGGCTTTTGAAAGCAAAATCCAAAAGATAAAAAATAATGTGAACAGTAAAGAATGACACCATACCAGATACT
GGTAAGAATTTTAAGTGGCATTCAAACACCCCTCTCTTTTTGGAGAGAGGACTAACAGTACAGGAAGATGCGGGGAGGG
TGGGGAGGGATTGTTGCCGTGCAAGTAAAAAGAAAATTACAGACAGTGTTCATGAAATATTCATTTACACCTGCTTATT
GGTTAGATGAACAGCCTTTGGTTCTGAGCTGGCTCACCATTCCCAGGCTGGAAATTATTCACTTAAATGCAGCTTTTAA
ACATTTTCTTAAAATCCTCAATGGAAACAGATGTGCACATGCTGAGGGAACTTTTTTTTGATCTTTTTCTAGAAGAGGG
TTAAATTAGAAAAAAAAACCAGTATTTTTAATATTTAATTTCATGTGTATAGCTATGAAGCTATATACTTAAATGCTTT
GTAACATATGATCATGAATATATGTATAAACTTCACCCAGAAAAATCCATAAAGCTTTGACAATAAATGTGTATAATC
TGGATAAATGAAATACCAGTGAACTCAAACATAATTTATTTCATGTTTTATGTCTTCTCTTTCTCATTTTCCATGTACA
ATTCCTGTGTACATATGAAATAACATACAAAATACAATTGTACGTATGCTTCAATGGCATTTTGCCCAAATTCATAGTC
CTTTTTTATATGGCCGTGGATTTCGAGATTTAAACATATATGGTAAATAGTATGTTTCTGTTAACTTCAGCATAGCCCT
TTTAGTAACAAGACATTGTTTACTATAAATTGAGATTATCTATCCAATGTGAGTAAATATATTATTAAAAATACATTAA
CATTTAAGATGAACAAATAGCAAAGGTTAAAAGGTTTCAGAGACCATTACCTGTTACTAAATCATTTCTCTCTCCCATT
TACTAGTCTTATCTCATTGAGTTTCCTGCTGTCCTAGAATGTCATCCCTCTGTCTCTGCTTTATTTAGTTTTTGTCTAT
ATTCAACTCAGACCCTATATCATGTACAAAGCTTTCCTCAAGTCTTTGAACACAGACTGGTTTATTCCTGCCCTAAAAT
CATTTTTTAATAGAATCCATGTGTTAATTTTCTGAGGCTGCCATAACAAAGTGCCACAGACTGCAAGCGTAAATAGTAG
GAATTGATTTACTGATAGTTCTGGAGGCTGGAAGTCTGAAGTCAAGAGAGCAGGGTTGGTTTCTTCTGAGGCCTCTCTC
CTCAGCTTGTAGATGGCTGACTTCTCTCTATTCCTTCACGGGGTCTTTCCTCTGTATGTGTCTGTGTCCTTAGCTCCTC
TTATAACAACGTCACATTTGATTAGGGCCCACACTTATGACCTCAACTTAATCACCTCCTTTAAACCCTGTCTCCAAAT
ATAGTCATATTCTGAGGTACGAGGACTTCAACGTACAAATTTTGGAGGTATATGTACGAGGACTTCAATGTATGAATTT
TGGGTATAGGATTCACCCCGTAACAGCCCATGTTAGTTTCTCACTTCATTATTCTCTGATTCTTCCATGTATATTGGTT
CTATCTTCCCTAACAAGTTCATCAAGGATAAGGATTGATCATATTTCAAGTTTTGTTTACTTCATTCACAGTTCCTAGA
GGGCTGGCATATAATATTAAATGCTACATATTTGTTGTTTGAAATTACTGGAAAAAGTAGCATAACAGGACCAAATGAG
AGCCTCTTTTTCCAATTATTGCTGACTTTAGCTCCCTTATCTGGACAGAAAAAAACAGTAGCAGAGGTTTGAGTCAGGC
AGTGGTCAAATGAACTGTCTCTGCTTTCTTTCTGGGAGGCCCAACAGCATTCTCGTCAGCAGGAGCATTCTGGCGAAAG
GAAATGCTGATCTCTGCAAATGGGCAAAAGTGTAAAGAGCATTGAACCCAGCCTCATACCACAGAAAACAATTTGGGCT
TGTGGAAAATAATTACCCAGTGAAGAGTCTTCTGAACTAGAGGCAGGTTTTTGGAGGGGGAAATCATAAACACATTTGT
GGTTGCAAGGTAGCAGATTGGGTGAGCTGAAACTAAAACAAATTTTGGTTTAAGAAATTGTATTTTAAGTTCTGAAGTC
ATACTTAATTCTTAATAATTCTAATTGTACACACGCTAATTTAAATGGAAGATGTTTACTTCATTAAAATTTCAACACT
AAAATGCTGGTTCAGTTTGTTGTATTACTTTCTTCAGGTTTTGTTATATTCTATTTTTCATAATTTCTAGAGCCAGCAT
TCAAAAGTAATTTCTGTGCTTCAAAATAGGATCATCCTAAATTCAAATTATATGTAAATGTCATTGAATGCAGATATAA
ACATGGTGCCACAATTTTATAGAAAATTCTAAAAAAACAAAACAAAACAGAATAACCATGTTGCTCTCGTACCAAACGT
GTCTTTGGGTGGGTTACTAAGTCCACCTGAGTCTGAGATTCTCCATCTGTAAAAAAGGAATCAGAATACCTACTTTGGG
CAGTTGCTGATATTAAATTTAAATAAGCAAAGCAGTTAGCCCAGTCATGTCAAAATAGTTGAGCCCAATGAATGGTCTT
TTTCTTTATCTCTCTTCAGGTTGAATTTTGCACAGTAGATAATCCATCTATCACAGAGGTGTGCAGATGTGACTGATTC
ATTGATTGAAACATTCATTGCCCCATTTAAACAATGTTTAGGTATTATTATCCACTGTATCCTGGTTTCATGCTGGATG
TTGGGTAAATAATGATGAGAAGAAACAGACAACTCCAACTTTAATGGAGAAATTGACATTAAAAGTCTAAAAATATGTA
TAAAATTTTAAAAAATCAGTGTTGTGTAGTAAATATACACAGTACCAGGAGATTTTATAACAGGGAGGGTATGTGTAAA
ATGTCAGGAAATATTTCTCCTAGGATGTAACAATGAGGAGAGTTTCAGAGTATGCATGTGTGCACATATGTGTATGTGC
ACATGTATGGATATGTGTTCCAAAAGTAATAGTGGTTAAGGTGGTGATGGTAGTGGTGGTGTAGGTGGTGATGGTGGTA
GGAGAAGCAAGAGAATGAAATAAATAAAAAGATGAGTGTCTGGGAACAGCATGTGCAAAGTCCTGATGTAGGAAACAGT
ACTGAATGGACAGTACGGTTTACCAAGGGAGGGCTGGTGAGGCTGAGATGAAGAGAGCTAACAGGAAGCCAGTAACTTG
AGATGAGGCTAGAGAGGAGAGCAGAGGCCAACTGGAGCAAAACCTTATAGACATATTAGGTCTTCTACCCTAAGAACAA
TGGGAAGCCACCTAATTTTAAGAGAAAGCTTAATGGATGTGTGTGATTCAGTGCAGGGACTGCTACCGCTCTTAATCCT
CGAAATATCCTGCTAACCAGGTTGGCTTTAGTGGGTGGAAAAGTGAGGCCCATACATATTCAAATTTGTATTTTGAAAA
GATTTTTTTTTTGTCCTCCAATGCTTTTGCCAGAATATAGAAATTCAAAGTATGTGTATTTATAGCAAATACGTAGATG
TTTTTCACCTTATAGGTGTGTTTTTATCACATTATTTTTGCACATATGATTCCTGCATGACCCGAGTGAAGGGGTGGGT
TGCCCCTCCACACCTGTGGGTGTTTCTCATTAGGTGGAACGAGAGACTTGGAAAAGAAAAAGACACAGAGACAAAGTAT
AGAGAAAGAAATAAGGGGACCCAGGGAACCAGCGTTCAGCGTATGGAGGATCCCGCCAGCCTCTGAGTTCCCTTAGTAT
TTATTGATCATTCGTGGGTGTTTCTCTGAGAGGGGGATGTGTCAGGGTCACAAGGCAATAGTGGGGAGAGGGTCAGCAG
ACAAACACGTGAACAAAGGTCTTTGCATCATAGACAAGGTAAAGAATCAAGTGCTGTGCTTTTAGATATGCATACACAT
AAACATCTCAATGCTTTACAAAGCAGTATTGCTGCCCGCATGTCCCACCTCCAGCCTTAAGCGGTTTTTCCCTATCTC

Fig. 9.242

AGTAGATGGAACGTACAATCGGGTTTTATAGTGAGACATTCCATTGCCCAGGGAGGGGCAGGAGACAGATGCCTTCCTC
TTGTCTCAACTGCAAGAGGCATGCCTTCCTCTTATACTAATCCTCCTCAGCACAGACCCTTTACGGGTGTCGGGCTGGG
GGACGGTCAGGTCTTTCCCTTCCCACGAGGCCATATTTCAGACTATCACATGGGGAGAAACCTTGAACAATACCTGGCT
TTCCTAGGCAGAGGTCCCTGCAGCCTTCCGCAGTTTTTGTGTCCCTGGGTACTTGAGATTAGGGAGTGGTGATGACTCT
TAAGGAGCATGCTGCCTTCAAGCATCTGTTTAACAAAGCACATCTTGCACAACCCTTAATCCATTCAACCCTGAGTTTG
ACACAGCACATATTTCAGAGAGCACGGGGTTGGGGGTAAGGTCACAGATTAACAGAATCTCAAGGCAGAAGAATTTTTC
TTAGTGCAGAACAAAATGGAGTCTCCTATGTCTACTTCTTTCTACACAGACACAGTGACAATCTGATCTCTCTTGCTTT
TCCCCACACCCGAGATCTTTTAATATTCTAACATACTCTTATGTTCTAAATCAGTGACACTTAGAAAGAAATGTTGACT
TGAACATCCAAGTACAGGTGCTAATTTGACCTAGCAGAAACATTTTTTAAGGAAATCTCTCTGCACTGAGCACTTGCAT
TATCTAGCAATGGAAAATTCAAACAATAGAATGATTATCATAAATTCCTTTGAATACCTTTGTTAGCAGAGATGAAACC
TTGGCCACCTGGCTTTAAGGGAAAGCTTAATGAGCATGTGATTCAGTGCGGGGACTGTTACCTCTCTTAATCCTAGAAA
CATCATGGGAACCAGGTTTGCATCAGTAATGAATTTTTATAATGTGAATCTTTGATTTTCTTTCGCTGGTAAGAAACCT
TATTTGGAGATGCTATGTATGTGAGTTTAATCTCATTTTCCATTCCTTCTTGAAGCTTTCTAGGTTAACCACCTGAAAC
AGTGGTTACTATAATCAGTAAAGATTTATAACCAAAGTATAAGGAATTGGGGAATTTCCATATGGTGTGTCCTCACAAA
CAAACGTCATGTTTCAATATGATATGAATGCATCTCCATCCAAATTATTATTTTAACTGTATATTTTTCCCTCAGTCAG
CAATTTATGTAACACATATATTTCATTTCATCCAACTCCTAATAAGAGACCCCTAAATTAACCTTGAACTATGATTTAC
ACCTTCTCAATATACAGTCAATAATTGAATTTAATGACTAACCAAGGACATTTTAGTCATTGCAACTGCTTACAAGATT
ATATGTAAAGGATTCAGGAATAAATAGAGGGGTCTCTCAGTATGAAGTTTAAATAAATACTTAATGATAAAAGAAAAAT
TTGTCTGCAGTTTTTTTTTTTACAATTAACTTTTTACAAGTTATTATCCCCTTAGGCTCATTCCATTCTGCTCCCTTTG
TTTTGAAACACTGTTATGACATACTACTGTCAGTAATGGAATGTCAGAAAATAGTACATATGAAAGACACAGTTCATTC
TACTGTTAAATATTACATCATTGAAGGGTTTAAATCCTAAGACGTATCTTTGATTTACCAGCCCAGCCCAACTTCCTAT
TTGCTCTCTGCTCCATTTAGTAGATTTCATGCTGGTTGCTGGACTAAACAAGTCAAACACCTGCAAGGGCCCTCCATCT
GTGGCCAGAAAAGTGTTGCTGGTGGTATATTTTTGATGTTTAGGAAGAAATATTGATCTGCTTAACTAAGATGGTCATA
AGATAATATGGGGTTGTACTCATCTGATTCTCACAAAACCCCAGGGTGCTCAGAACTATACTGATGTGTTGGAGATGCT
ACTTAGGAAATTAGAGGACCAGCATGCATGTCCTTTGGAATGATGTATGCCACCCTATCATCTGCTTGGCCAACAACTT
GAGCCAAGACACACCTGGGGTATCTTGGTACTACCTAGAGACCCTAGCTAATTTTGCCAGGGTGGATTGGTAGAATCCA
AGGAAATAGTTTTGCAAGTGACACAATTGGTGGATGATATAATAAGATAATGAAGACTAAAATAATTTGAAGAAGGGAA
ATGGAGATAATTTAGGCTAAGTTGTTCTATTTGCTATTCTTAGAAGTGTTTTCTTCACATTTAGAAGAAGAACAATTGA
TTATAAAATCACTGCTTTGATGCATTAATTTGATCATTCTAAACAGGTGATGAATATTGTCTTATGTTATTTGCCTCCA
TTACTTAATCTGACTATCATAGAATAGCTAAGAATACTTCTTAAGAATGAGAGTTTGCAACTACCAGTCACATAGGCCA
GTATCTGTTAACAAAATGCTAGTAATTTTGTTCATTAAATTTTAAACATTAAATCTATTATTGCATTAAGACCTATTAA
AATGGACAATAAGTAAGGGCCAGATATATCATGAGTAGAAGGAGTCCCTTTCTACTGAGAGCCTATGGAAAGGACAACT
AGATTCCAGAAAAATCTGTTCAACTTCCAGGATGGCATACTAGGAGAAATAAATTGGGGGTCTAAAGAGTAATAAGCAG
GAAAAAAATCTGGTTTTCTTTGAGGCAATGATTAGTTGAAGCCTACACAAATAAACCAATTACAACATTTTGACTGAAC
TGAGAATAATTACACTGGTAGTCAACTCCTGGGGAAAAATTATGAAGTTCAGGCTGTAAGCTGTCTAGGCTTTTATTAA
CTTGCATTGTTCTTAACTGATTACAGGCAAAAAGGTCAAAACATTTTGGCCTACCTAGGTAGCCAGATGGTCTAGAGAT
AATTTCTTAATTACCAAATGACTGTGTTTTATAGTGTCCCTTAGGAAACCAAGTTTTAAAACTGTGTCTAAAGAGAACC
TGATTTAATTTTTTGATGTTTCTTTTATTTTTGCTTGATTATATATTATAATCATTTTGTAAAAAAAAATCCAAACACT
ACAGAAATATAACTTGGATGTTTATAATCTTCGCTTCTCTCTTAGATAACTATTTCTAAGAGTTTTTGTATACATATTT
AGATTTTTGATACATGTAAATATATATAATCTTTTTTACTAAAATGGTAATTTACAACATGCTTTTAAACAAACTTTTT
TTTTTACCTAAAATTTCTTAGCTATTTATGTCAGTACATGTTGCTCTATGAAGTTGTAAACAGAACAAAGCAGCGTGCT
CCCCAAGAGGACTCTTAGATATTTGAAAGTAGCCCATAATGGTAAAGTAAATTCATTCCTGACTTTGCTTGAGGAAACT
AACATCCTCTCCATCCTGCCTTGAGGACAAGTGTGTTCCTTCATGGCTGACACATATCTTGGCAGAGCACATGTGCTGC
AACAGCACACAGTATGGGGTAGGAACAGGATTTGAGTGATTTACTAATCAAGTGTTGGCTAGAAGAGAGGAGACTTGTA
CCACCCCGACCCTGCATCATGCCTCTTGCTCTCCTCTTTAGGGTGAATGTAAAGGGGAATCTGCCCAGTTGGGGTACAG
ATAAACCTTTTGGTTACCAGACTGTTGGGGTTTAGATGTCAACTCTTTATAGGAATTGTCTAGGAAAGTCAGCTGTCCA
GGCTTGGAGACCTTAAGGAAGCATGGAAAGCTGCAGCTCCCTTTTTCCAGGAAAAGGCAGTCACCCGTCTTCTTGGAAG
CTGTATTTCAGGGAGGCCTCTCCAGATGGGCTGGGGGACACTGCCAACTGTTAGCATATTGTCCAGACGACCCAGCATG
AGCTATCTAGGTCATGTTCAGACAGTACCACTCATGGTGTTCTCTTGCTTAAATCATTGTTCCTGAGTAGCCTTGAATA
GTAACAAATGTGATATCTTGACATCATCTGGTGGTTGGGTGACAACTGTTTAATTTTCTAACACAGTTGGTTTCTGCAA
TGCCTTTTCCCAAGTAATTTAGTATTGTCTTATCCTGCTATGTCTTCCACAAAGGGAAGATGATAAAATCTTTTTAATT
AGCATAATGTTTGTCTACTTTAATTTTACATTAAAAATTTGTTATACTTTTATTAAAATACTTTCACAGTAAAGTTTTA
ATCCATTTTCCTATGGATTTTTCATTTTGTAATATTTCTTTCCCATTTATAATCATATAACATATACATTTAATAAAAG
TATATACAATATATATCAAGCATATATGGTATATATACTATAATTTTGTCTGTTTTCTACTTTCTTTCTACTTATGTCT
ATTTTCTGTATTTTTTCCATATGGACATCATTTTTCACATTTAATGTCTTCTTAACATTACAGGGCAGTTCTAATTGTT
AGAAGGCCTCCTTATACTGATGGCTAGTTTGACTCATTATAAAGTCAGTTATTGTTCTTGGTTTTATGTCTTAACAAGG
CATCCCCTCCTCGAACCTTAGAGGAATTGATATCTGACTTCACATGCTCTAGGGGATGCCATGTAAAATTTTGTAGAAA
TGTTTAGTATTCTGGCATGTGTGTCTCTAACTTTGTCAGATGATTAGAGATCTGTGATTAGTTAACAACCACACAGGAC
TGAATTAGCTTCCTTCCGTAACTAAAAGAATTGAACAGATTGAGTAAATTAAGTGGATGCCTCATTAGCTCCACAAAGT
TTATTAGAATTAGAGTCAAAATCTAATACAGGGCTTTGGACTACTAATATCTGCTAGCTACCTTTGGGATGATTTCAGT
ATCATAGGATCATCTGACCAAACAAGCTGTCTCAAATTCCTGTTAGAGTGAAACCTTGGCTGGACATTAGCTTCACCTG

Fig. 9.243

GGTAATATTAAAATACTGATACCTGGCCCCAGCCTGGAGAGATTTTGATTCTATTAAATTGCCAGAGTTAGGGTTCAAG
GCAAGGTACATCCAGAGTTGACAACCACTGGATTTGAAGCCAAAATGTATAGAATGTGAAACAGGTAAGCACTGTTGGA
ACTACCGAGATAGAGACAAACACATTCCAGGCACTAGCCTCTGCTTCTGTCTTTTCTGATGTAAGAATATTTCGCCTCT
CAGAAAGTTGCTTCCCAAATGAATACTTTTAAAAATTAACCTGGTTTTTTCAGTACATAAGACAGGGTAAGGAGAAAAA
GTTCACCTGGTTTTTAAAAACACTATTGTTTAAACTTTAACAGAATTATCTTCTCAAAATACTTAGAAATGGAGTAAAT
GTTTCTGCTTTGATAACACTGAAACCAAAGCTAGAGAGTACAGTTAAAGGGCCATTAAAAACAGTTTTTATTCTATAA
AAATAAATTAATCATCGAATATTCATTATAAATTCAATCATGAAGGAAAATACACATTAAATTATTTATACTAAGATAA
ATATAAACCTCTATTGGCAAACAACTTCGTAGTTAATTTTTCTAATTTACCACTTTCTGCATCTCATGCAAATTATGTC
TTCTTGCATTGCCAATAAAATATGAGATTGGGGAAGGATGCTGCAATATCCATGAGAAAGTTTCATGTAAGTGCAAGCA
ATCAGATTTCATTGCAGATCCAGAGTAGTAACACTGACAGAACTATGTCAGTTAAGCTTTCTGCATTATTTTTATGCGT
TGTCATTTTCTTTTGGCAGAGGAGAGATTGAGGATTTACCTGGTCCAGAAATCGTTGTAGGTTAACAAGGTACCAATCT
GGGTTTGTTTTTATCCCCTTGCTTAACCAATCGTACAGTTAATTCCCAAAATGTGTTATTTTTTAACATGCAAAGCAGT
TCAACAACGATAGAAGGTGTAGGGATTCCAGCCACAGACAGAGCCTGAGAGAACAAACAAAGCAGATTCAGAAAGCAGG
CAAGTAGCGCCTACTTTGTTTCAGTGGTATGTCCTCTGCAGTTCAAAATCCTTCAGTATCTCTTAATTAATTCATAGAC
TATTTCCAGTGAGGTTTCACTGAGAATTCCTTAATGTCAAGAGCTCTCTCTGTATCTTAAGCAGTTAGTGTCATTGAAA
TTTACTTATGCAATGATTCTTTCACCAAATATGTATTGAAGGCTTATGATGTGCAAGACATGTCCCAAGTTCTGGTAAT
ACAATGATGAACAAAATTAATAGTTTCTTTCTACACAGTTTTTGGTTTATCAAATTTATTACATGTTTAATAAATGTTC
ATTAAGTGCATAAATAGTAAAAGAATCAAAGATGTGATTTCAGCACTATGTATCAAAACCACAGAATGGCTGAGTGTTC
TTTTTAAATCCATGTATCATAGTGTATTAGAAGGCAAAATAATAAGAAAGCAGATCAGAAGTCAATATGGTCCAGTAAC
AAGAATAAGGAGTCAGATTAGAGTCACATTAACGGTTCACATTTTCCTAGCTGTGGGACTGTAGGTCGTTATTTTCTTG
TCTTATTTTGTCTTTCTGTTTTTCTTTCTTTCTTTTCTTTTTCTTTTTTTTTAGACAGAGTTTCACTCTTGTTGCCCAG
GCTGGAATGCAATGGCACAAACTCAGCTCACTGCAAACTCCGTTTCCTGGGTTCAAGCGATTTTCCTGCCTCAGCCTCC
CAAAGTAGCTGGGATTACAAGCGCCCACCACCATGCCCAGCCATTTTTATTTTGTATTTTTACTTGAGATGGGGTTTCA
CCATGTTGGCCAGGCTGGTCTTGAGCTTCTGACCTCAGGTGATCCACCTGCCTCGGCCTCCCAAAGTGCTGGGATTACA
GACGTGAATTCTATAGGTCTCATTTGCACCATCTGCAAATGTGAACAATGGTATTGTGTTCATTTACCCATTCAGCCAA
CTTTTCCTGAACATCTCTTAAGTATAGGGTTCAGAGATATGGTAGGTTGGGTTTCAGATGACCAAAATAAAGTGAATAT
TCCAATAAAGTGAGTCACACACATTTTGGTTTTCCAGTACATACAAAAGTTATGTTTACACTATAGTCTATTAAGTATT
CAATAGCATGTCTAGAAGACAACGTGCATACCTTAATTTTAAAATATTGCCTTGCTAAAAAGTGCTTATGATCATCTGA
GCCTTCAGCAAGTAGTAATCTTTTTGCTGGTGGGAAGTCTTGCCTTGACGTTGATGGCTACTGATTGATCAGGGTGGCG
GTTGCTGAAGGTCAGAGAAGCTGTAGCAATTTCTTAAAACCAGGCAACAATAAAGTTTACCACATTTATTGACTTTTCT
CTTCATAAAAGACTTCTCTGCAACATGTAATATACTGTTTGATAGGATTTTACCGAATGTAGAACTTTCAAAATTGGAG
ACAATCCTCTGAAACCCAACTGCTGCTGTATCAGCTAAGTTTATATAATATTTTAAATCTTTTATTGTCATTTCAACAA
TTTTTATAGCATCTTTACCATTAGTAGATTTCATCTTGAGAAACCACTTTCTTTGCTCATCTATAAGAAGTAACTGCTC
ATCTCTTTGTTGCTGAGATTGCAGCAATTCAGTCACATCTTCAGGCTCCACTTCCAATGCTTGTTCTCTTGCTATTTCT
ACCATATCTGCAGTTAATTCCTTCACTTGAACCCTTCAAAGTTATCCATGAGGGTTGGAATCAACTTTTCTCAAACTCC
TGGTAATGTTGATATTTTGACCTCCTCCCATGAATCATGAATGTTCTTAATGGCATCTAGAATGGTGACTCCTATCCAG
ATTTTTAATTTTCTTTATCCATATACATCAGAAGAATCACTGTAGAAAGTAGCCTTCCCAAATGTATTTCTTAAATAAT
AAGACTTGAAATACTCTTTGAATCATGGCTGCAGAAAGAATGTTGTGTTAAGCATAAAAACAACATGAATCTTGTGTAT
TGTATTAGTCTGTTTTCATGCTGTTGATAAAGAAATACCCGAGACTGGAAGAAAAAGAGGTTTAATGGACTCAGCTCC
ACATGGCTAGGAAGGACTCACAGTCATGGCGGAGGGCAAGGAGGAGCAAGTCACATCTTACATGGATGGCAGCAAGCAA
AGAGAGAGCTTGTGCAGGGAAACTCCCATTTTTAAAGCCATCAGATCTTATGAGACTCATTTACTATCAGGAGAATAGC
ACAGGAAAGAGCTGCCCCCATAATTGAATCACCTCCCACTGGGTTTCCCCCACGACACATGGGAATTGTTGGAGTTATA
ATTCAGGATGAGATTTGGATGGGGACACAGCCAAACCATATCATTCCACCCCTGGTACCTCCCAAATCTCATATCCTCA
CATTTCAAAACCAATCATGCCTCCCCAACAGTCTCCCAAAGTCTTAACTCATTTCAGCATTATCTCAAAAGTCCACAGT
CCTACATCTCATCTGAGACAAGGGGAGTCCCTTCTACCTATGAGCCTGTAAAATCAAAAGTAAGTTAGTTACTTCCTAG
ATACAATGGGGGTACAGGCATTGGGTAAATACCATTCCAAATGGAAGAAATTGGCCAAAACAAAGGGGCCATAGGCCCC
ATGCAAGTCCAAAATCCAGCAGGGCAGTCAAATCTTAAAGCTCCAAAATGATCTCCTTTAACTCCATGTCTCACATTTG
GGTCATGTTAACGCAAAGGGTGGGTTCCCATGGTCTTGGGCGGCTCCACCCCTGTGGCTCTGCAGGGTGCAGCCTCCTT
CCTGGCTGTTTTCACAGGCTGGTGTTGAGTGTCTGCTGCTTTTCCACACATGGCGCAAACTGTCAGTGGACCTACCATT
CTGGCATCTGGAGGATGGTAGCCCTCTTCTAACAGCTCCACTAGACAGTGCCCTAGTAGGGACTCTGTGTGGGGGCTCC
AACCCCACATTTCCCTTCCACAGTGCCATAGCAGAGGTTCTCCATGAGGGCCCTGCCACTGCAGCAAACTTTTGCCTGA
GCATCCTGGCATTTCCATACATCCTATGAAATCTAGGCAGAGGTTCCCAAACCTCAATTCTTGACTTCTGTGCACCTGC
AGGCTCAACACCACATGGAAGTTGCCAAGCTTGGGGTTTGCACCCTCTGAATCCATGGCCTGAGCTGTACCTTGGCCAC
TTTTAGTCACAGCTGAAGTGGCTGGGACACAGGGCACCAAGTCCCTAGCCTGTACACAGCATGGTGACCCTGGGCCTGA
CCCATGAAACCATTTTTTTCCTCCTAGGCCTCCAGGCCTGTGATGAGAGGGGCTGCCATGAAGACCTCAGACATGCTCT
GGAGACATTTTCCTCGTTGTCTTGGGGTTAACAATTGGTTCCCCGTTACTTGTGCAGATTTCTGCAGCTGGCTTGAATT
TCTCCACAGAAAATGGATTTTCTTTTCTATCGCATTGTCAGGCTGCAAATTTTCCAAACTTTTGTGCTCTGCTTCCCT
TATAAAACTGAATGCCTTTAACGGCACCCAAGTCACCTCTTGAATGCTTTGCTGCTTAGAAATTTCTTCCACCAAATAC
CCTAAGTCACCTCCCTCAAGTTCAAAGTTCCACAGATCTCTAGGGCAGGGGTAAAATGCCAGCAGTCTGTTTGCTAAAA
CATAACAAGAGTCACTTTTGCTCCAGTTCCCAAAAAGTTCCTCATCTCCATCTGAGACCACCTCAGCCTGGACCTTATT
GTTCATATCACTGTCAGCATTTTTGTCAAAGCCACTCAACATGTCTCTAGGAAGTTTCAAACTTTCCCACATTTTCCTG

Fig. 9.244

TCTTCTTCTAAGCCCTCCTAACTGTTCCAACCTCTGCCTGTTATCCAGTTCCAAAGTCACTTCCACACTTTCAGGTATC
TTTTCGGCACTGCACCACTCTACTGGTACCAGTTTACTCTATTAGTCTGTTTTCATGCTCCTGATAAAGACATACCTGA
GACTGGGGAGAAAAAGAGGTTTAATAGGCTTACAATTCCACAGGGCTGGGGAGGCCTCACAATCATGGCGGAAGGCTAG
GAGGAGCAAGTCACGTCTTACATGGATGGCGGCAGGCAAAGAGAGAGCTTATGCAGGGAAACTTCTGTTTTTAAAACCA
TCAGATTTTGTAAGACTCATTTACTATCATGAGAATGCTGCAGGAAAGACCTGTCCCCCATAATTCAATCACCTCCTAC
CAGGTTTCTCCCACGACATGTGGGAATTGTGGGAGTTACAATCAAGATGAGATTTGGGTGGCGACACAGCCAAACCATA
TCATGTATCCATCAGAACTCTTGGATGACCAGGTGCACTGTCAATGAGCAGTAATATATTTTTAAAAATCTTTATATAA
GAGCAGTAGTTCTCAACAGTGTGCTTAAAATATCTAGTAAATCATGCTGTCAACAGATGTGCTGCCATCTAGGCTTTGC
TGTTTCAGGCACAAGCACAGGCAGAATAGATTTGGTGTAATTCTGAATGGCCCCAGGATTATTAGACTGGTAAATGAAC
ATTGGCTTCAACTTAAAGCCCTCAGCTGCATTAGCCCCTAACAAGAGGATCAGCCTGTCTTTTGAATCTTTGAAGCCAA
ACATTGACTTATTCTTTCTAGTTGTGAAAGTGCTAAATGGCATCTTCTTCCAATAAAAGTTTGTTTTGTCTACATTTGA
AATTTGTTGTTTAATGTAGTTTCAATGATCTTCTGGATAACTTCCTATAGCTTTGATATCAGCACTTGCTGCTTCACTT
TGCATTTTTGTGTTGTGGAGATGGCATTTTCCTTAAACCTCATGAGACAGTCTCTGCTGGCTTCAACCTTTTCTTCTGC
AGCTTCCTCATCTCTATCAATCTTTATAGAATTGAAGAGAGTTAAGGCCTTGTTCTGAATTAGGCTTTTCTTAAGGGAA
TGTTGTGGCTGGTTTGATCTTCTATCCAGACTACTCAAACTTTCTCCACTTCAGCAACAAGGCTGTTTCAATTTCTTAT
CATTTGTATTCACTGGAGTAGCACTTTTTATTTCCTTCAAGAATATTACTTTTGCATTCACAACTTGGCTGTTTGGTAC
AAGAGGCCTAGCTTTCTGTCTGTCTTGACTTTTGACATGCCTTACTAAGCAAGCTTAATCTTTTCTAGCTTTTTATTTA
AAGTAAGAGATGTGCTGCTCTTCACCTCACTTGAACACTTAGAGGTCATTGTATTAATTGACCTAATCTCAATATTGCT
GTGTCTCAGGGATGGGGAGGACTGAGGAGAAAGAGAGAGATAGGGAATGGCCAGTTGGTGGAGCAGTCAGAACACCCAT
TAATTGAGTTTGCCATCTTATATAGGCATGGCTTATGGTACTCCTAAACAATTACAATAGTAACATCAACAATCAGCAA
TTACAGATCACCATAATAGGTATTAAAATAATTTTAAAAGTTTGAAATATTGCAAGAATTATCAAAATGTGATACAGAG
ACATGAAGTGAGCACATGCTGTTAGAAAAATGGTACCCATAGACTTGCTCTACACAAGGTTGCCACAAACCATTTTGTT
AAAAAAAAAAAAAAAGCCATCTCTGCAAAGCACAACAAAACAAAGCACAATAAAATGAGATATGCCTGTTTCAGTCACT
TTGCTATTTAAAAGAGAAAATCTGTTAAGCCATAGTCCTTGTCCTCATGATTCTTACAGTTTGGACTGGAAGAAAATCT
TTAGGAGTAAAGACATTAAATGTGATGAATGTTTTGTGTTGGCCTTTTACCTATTTATTCTCAGACCACATATTGCCC
TTTCTCTGCCCTTTATAGTTGGAGGCTACGCTCTGAAGGCTGTGGTCTCAAGACTTCCATGTCCTTTGTTAGATAGATG
TAGCACATTGGAGGCACTGGTGGACATTTGGGGAGAGGCAGAAAGAGAGAAGCCAGAGTGTTTTACTCTCTCTACCTGA
GGCAGCACCTCAGGCAGTAGCTGTGTCTCCTCCATGGCTTCACCCTTAGCTAGGTGACCCTAATCCTTGCATACATCAG
CCCTCCTTTTTAGCTCTAGTCCAGGGGCGGTAGTTGCTTCCTGTTGTTTCTAACCCCTAAGTTGCCTCACAGTCCCCTA
TTTGGCATTTCAACTCTTCCATCACCAGTGCAATGAATCAGATCTATTAAATACACTACTTTTAAAATGCATAGAGTGT
TTCTTTTAGCTTAGTCGGAAGCTGTTTGATAAAGCCTTGATAGGAGTGGCAGAGGCGGATCTTATGTTAGAAGTAGTCA
ATGAAGGTTTACTGAGAAAGTAAAATTTAGGCTAAAACCTCAAGTGTGAATATAAATGTATCAATGGAGAGGGGAAGAA
TATTCTAGATCAGAAGTGTCCAATCTTCTGTCTTCCCTGGGCCACAATGGAAGAATTGTCTTGGGCTACACAGAAAATA
CACTAACAATAGCTGATGAACTAAAAAAAAGAATCACAAACAAAAAATCTCAATGTTTTAAGAAAGTTTACCAGTTTGT
GTTGGGCCACATTCAAGGCCGTCCTGGGCCTCATGGATTGGACAAGGTTTTTCTAGATCATGTGCAATGGGAAGGAAAA
TGAGGCATATTTTAGAAACTAAAGATGTAGACAACTGGAATGTGACATACAAGAGAAAGAAGGTCAAGAATGTTTGAGG
GCTGTCAAGCTCATTGGAAGACATTACAGTGGAATGACATGGGCATTTGTGTTTTTTAAAGTCAGTGGCTGCATTGTAT
AGAATTACTTGGGATGCAAGCAGGGAACCATTTAGAAGATTATTACAGACAGCGGTGTTGGTATGGAGCAGAATGATAG
CAGAGGCAATGGAGGAAAGTGAGCTTATCTGAGAGATAGAGGTAGGAGGTGGAGTCTGCATGTCTTGGTAATTGAGAGA
CTCTGTGAAACAAGATTGAGGAAAGGGTTAGGATTATTTTCAGGATTCAAAACAGAGCAACTGGGTAGCTGAGGTTCTA
ATCACAGTGAGAAGGAATATTGGAGAAGGAAGAGTTCCATGGTTGAACTTCAGGTATATGTCGGTTATCCCCAGGGAGA
GCTGTCCAGGAGTCAGGTGCGCTGTATGTGTCTGGAGCTCAGGAGGCAGATGCAGACCAAAGAAATTGATGGGGAGCTA
TCCATCTACAGATGGTCATAGAAGTTATTTGAGTCAATAAAATCAACTAAAGGGGGTGCAAGATTAGGAGAACAAGAGA
GTCCTGTCTCAAGCCTAAGAACTGCCAATATTTGAAGACAAAGCTGAAATGAAAGACATGAACAGAGACTTAAGAAGAA
AACCAAGAAAGTTAGGTGCTATGGAAGCCAAAGGAAAGGAGTGTTTCAGAAAGGAGGGAGTGGCCAATAGCTTCAGAAA
TGTTCATTGGTTTAGTGAAACACAAGTCAGTTGGTGACCCAATGGGAGAAATTTCCATATAGTAGGAGCATAAACCAGA
TTGAAGTGGGTTGAGGTGTAAGTACAAAGGGAGAATCAAGATAGTGAATATAAACAAAATTATTTCAAGAAATTATGCT
CAGAGTGAGGAGGAGGTAAGAAGTATCTGGATAGGGAAGTAGGAATTGAGAGGGATCTTATTTTGTACAGTGAAAAATA
AGTGCTTATGGAAAAGATTTGGTAAAGAGGAGGAAAAGAGTAAGGGAAAAATGGATGAAGCTGCGTATCAGAGAATGTG
AGAAGGACAAAGAACCAAAGCACAGGTGGAAGGATTTGCCCGAGTTGGTAACAGGAGGGAAAATGGAAATGATGACTGT
GGGAGTAGATGTGTTTGTCATTTTGATGGCTGGACATGGAGAATGTTCCTTTTTGATGGTTACTATTTTCTCTTTGAGT
AGGAATATCATCTGCTGTGTGTGGGAAGTGGGGACTCAAGTATTTGAGAAGAAAGAAGAAGGACGTTTGCTGTAGTCTT
TGCAGAAAATGAAAGTGATTTGATTAATAGTTGTTAGAATTTAAAAATGTGTGCACAGTGTTTGGGTTAAAGTTGTTTT
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TCATAGGTCAGAGAAAGACTGTGGTGCTACAAAAACATTAGCCAATATATTATTTGCTTTCACGCTAAGTGTAATGTGT
GTAACATGCTATCTCTTTGAAATTTTTTGCCTTAAAAATGCTAATCAGTTGGCACAAGGCGATCATTTACATAGTCAGA
ATAGAGCTTTTGGTTTAGCATTTTATCTTAAAATAAGGCAGAAATGGCATTGCTCTGGATGTCAGTATGGTGCATTATA
ACCCAAGTGGTGGAAAAATAACTGCTAAATGGCAAACACATAGAAACTGAATTCTGCTAGTCAGCTTCCATTTGGTAGA
GATATGTGTGCCCTTGGGTAGCTGCAATGTTAGCTATTATTAATAGTTCAAATCTTTGCTTCATAAAAGTTCTGCATAT

Fig. 9.245

AGTGTTGTACAAATTGAAGTGATTCAAGGAAATCATAGTTCTGTGGAGCTTCCTCCCTGTTTTGTAGTGGAGATTGGGA
ATGGGGGTGGACCATAAAGTAGGTGGTTTTTTTTTCCTGCCACTCTTAACTAATTACACACCCTGCCATATCCCCCAC
CAACATAAGACTTCAGACTGAGAAAACCTACATAATTTAACCAATGTTAGAATATAGGCATTTTTAACGTGCTGAAAAC
AGTGTTGTTCTTTTGGTTCCTAAACTAAAATCATTTGATACATTTCTCTGTCCTATGAAGGAAGCCATGAATGCTATGA
GTAAAGATATTTGTGGCAGGTAAGAAGAGGGAGTTAAGTAAGGGAGTTTAATATGAAAAATTCATATAAAGGCTCCAAG
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GAAGGAATCGATTTGGGAGAAAAACTATATCTGCTTAATGTGAGGGAGCACTGTGGAAAATTTCCAGCACAAACTTTTC
CTGGGCCTCAACATTTCTTGGTAATGAACCTAGATTTGGAGTGATCAAATAATTTGCTGTCTCAAGTAGTAAAAGGGGG
ACTATTACTAACTTCACAAGAAGACAGGCATAAACCCAGCAACATGTACAAAGCAGGATGATCTCAGGTAACTCAGGAA
GATGCTGGAACACTCTGGGTGAAGGGCATTAATGCTGTTCACAGTGGAACACAGGACTGCTAATGGTATTTTTATGCTT
TTATGCATCAAAAGCATTGTTCTTTGATTTGTAATCTCTCACATATGTGAAGCAGGGCCTTTCAATCTGGATTTGGGGT
CAGAAGACAACATGTGGATGGGAGGCAGAAAATTATAACAGACTCACCTGGGGAGCAGTTTTTTGTTGTTGTTGATATT
CCCTAGCTGCTGGGAATGGTGGCTCACTCCTGTAATCCCAGTGCTTTGGGAGGCCAAGGCGGGAGGATCACTTGAGCCC
AGAAGTTCAAGACTAGCCTAGGCAACTTAGCAAGACCCCATCTCTACAAAATTTAAAAAAATATTAGCTGGGCATGGTG
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ACATTATTCTACATTCTTCCTTTTTACTCTCCATATTGATACAGAAACAAAACAAAACACATTTGAGACTTACCACTGC
AAAAGAGTGTTCTTTGAATTGTGGCTGCAATTATTTCTGTTGCAAACTTTAGTGTATTATTGTTATAATGATACTTGAA
GTAATACCCAGATGTATTGAAAATTCAAAAGACTTCATTGCCAGCTCAACCTGCACTCTCAAGCACTGCTTACTAAGGG
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TCTCCTCATCAGTGTGGTTGAGGGAATATTGGGGCATGGCATGGAGAGTCCCACCTCACTTGGCAGCCAGAGAATCTTA
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TTGTTTCAGCTTATTTTGACTAATTAGGCTGAGGTTACAAACCACCCTGATATTTCAGTTGCTACAGCCACAGTCTTAT
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CCCATCCTGAGAAGGCAGAAGAAATTGGGAGATGGCAGGGGCACACAGTGATTTTTTAAAACTTCTGTTTAGAAATGCC
ACAGATCTCTTCCATGCACATGCCATTGGCCAAAGTGGGTTGCAAGATCAGCTTGGTGTCAGTGGGGCAGGAAGTATAA
TCCTGGCACAATAATGGGCTTGGAAAGCTGTTAAACATTTTTACAATAACACAATCAGATTCTTTCAAATTAATTACAA
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GTTTACTTGTCTCTCTCCTTCCCTCAGTGGTGGGCCCTTGGAGGGCAGGAGCAATGTGATATTCATCCATGAGACCCAA
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ATGTGAAAGCGATAACTATTTTTCATTATTTCTGATGAGACATTTTAGCAATTATGTTAAAATCTGCACAACCAAAAAG
TCTAAACAGAGCGTGAACCTCTGACATTGACTCTGGAAATTACACACATTTTGTTTTACTATTTTAAAAACACACATGA
ACCGAAGAGAAAAGAGGCAGAAAGACTGGCTAGAACACAGCAGAACTTACCCATTAATGTAATGGAGTTTGAGCCTTTC
TCAATGATGCCTGTGGGGAGCTCCGTACTAGTAATATCTCAAGGATATTGCCATTGTTCAAACATTTCAGGGATTCCCC
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TATTTTGAGTCAAAATGAGAAGTAACTATAAAATTAAGAGGCAGTTTTCTTATGCACACTGGAAGTGCCCTGTAATGAT
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GAAACATTGGTTTGAATTTGCATATGGTATACATGTTTGAAGAATCACTCTTGTTACTATATAGGTAACACTTATAAGT
GTTAAAATTATCAAGTTACTTAAGTACTTATAATGAATATAAATAAAATGATCCATTGATATTTGTCTATATATATTTTTA
TACATAAAAGATTGTATATGTTATATAATATATGTGTATACATATAGCACAATGACCAAATTAAATTGTCTTTGCAGCT
ATTTTTAATTAAAACATTTTCACATTACGCTTTCTTAAACAATTGCCTCTGTTATATCAGAAGCCAAAACTGGCAAATT
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CAGGTATGTATGACCATGGGGCAGACAAAAGACTGCTTTAAAAATCACTGATGTGTATCATGCTTTTTCTTCTTCTTTA
GTATTTCTAGCCATCAAAAAGAAATTATATTGTGAGGCAGATGGCAGTAATATATTTTTCAAAAGTGAATTATATCCTG
TTTCCCCATATAGGTAGGTAAATAAATAAATAAATAAATTCTATATAAGCAACATGACATAATTCCCAGACTATGAATT
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ATTCTGTTAACTGTGTTATTTTTGTCTGTATTATGTCAAATAATTTTGACTAAATCATTGGTATTATCAAGGTCATGTA
GAAGTCTTCTTAAATTCTGATTAAATAATCGACTTTCTTTACAACTACAGACAAATTGCAACAGAATCTGTATTTTCAG
GCAGTTCAGCCTGCATAGGGTCAATTTAATACCATATAAATGTTGGGAACAGAATTATCAGAAACTTCAGATATGTCAC
CATAAGCCAGATGAACAATATATGTCAGTACCATTGGGGGAGTATTTGCCAGCATAAACTGGATATGTTTCTTGAATGC
ATGAAAAATGTGGTACTGAATGATTCTTCCTTCACTAAAATTGACTTATTTATCTTGATTTAAATATAGGCATACATTG
GTAAATAAAACCTAGGTTTTTCATAATATATTAGAGAATTTTTGATACATAACAAATGAGGTAATTCCAGATCGATTG
GAATTCAGGTTTAGTGCTTCGTAAAGAGTTGAAAATAGTTCCTGGTAGGTAAGTAAATTGTGGTGGGAAGGACAGGACA

Fig. 9.246

TTCTCTAAAAGTGCTTGGTTTTAGAGATGTTTTGGTTAAGAGTTTGACCAGGTGGTAGCAGATTTACTTTTTCCTAACT
CAGTTTTACTTGAAAGGCCTTCAGATTAAATACTTACAGAACCAGGAAGAAATGTATCTGAGTTACAGAACTTGAATGG
GGATTGTCAAACTGGAGAATGCTTGCCCCATCTGAAGGAGATAGCTGGCAATATGTAGGGAGGGGAACTCTAGGTATTT
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CTGCAAGCTCCGCCTCCCAGGTTCATGCCATTCTCCTGCCTCAGCCTCCGGAGTAGCTGGGACTACAGGCACCTGACAT
CACGCCCGGCTAATTTTTTGTGTTTTTAGTAGAGACGGGGTTTCACCGTGTTAGCCAGGATGGTCTCGTTCTCCTGACC
TCGTGATCCGCCCGCCTCGGCCTCCCAAAGTGCTGAGATTACAGGCGTGAGCCACCGCGCCCGACTGGGAACTGAAGGT
TTTAAACCTCCTAAACATTCAAAAGAAGCCCAAATCTCAACTTTAATGTGACATTTTCTGTGTGCTTTAAATGTTGGAT
CAAAAGGAAAAACAAAATTAAAAATATGTTGGACAAACTCAGGCCTGCTGTCCATATTTGATCCAAGGAGGACCAATTT
ACCCACTCTATCCTACACCTTTCAGGTCATAGCATTTTCCTTTGTTATCTTTCGGCATTAATGTCATATTCCAATTTTT
CCATATCTATGAGCAAGGCCCAAGGTCTGTAGCCAAGCCCAGGGTTTGCATGTGATATCTTTAGAAAAACCCCAGAGAA
GCTTTCTCTTGTTTTCTCACTATGCTGTAAGTATGAATAGCCCAAAGCAAAAAAGACAAGTACCCTGACTATCATGATC
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CGTCTGCCTGGAATGAGATTAGCAAAAGAGTCGTTGTGTAAACTGAATTAGTTTACTTCATGCGAGCATTGATTTTACA
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TTCCCACTCTGCTGGGTTTTTCTAAGGTCAAAATAAATTAGAATTAAGTGATTGACTTTTTAATGTTGTATAGTGGTGG
GAAAAGGTTAAAAAGAGTTGCTTTTCGTAGCAAGATGGTATGGGCCAATGACTTCTACCAACACCTAATTCGGTGATAT
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CTTGCTGATTTGTCCCTAGTTTATCTATTATGAAAACTTGGATGTTGTCAAACCACATTTTCATTCCCCAGTCTGTGTT
CACTATTTGATGTTCCCCACAAGTTACACTGCCTTGGTCTCAACTAAATTGGTTTTCTATATTACAAAGTCAATTTAAT
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CACTGGAATGCAAAGTCAGAGTCAATAGTTATTTAAGCTTGCTAATAAAAATGACTGCAATTTCAAGTGCACAGTTAAT
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CTGGGAATCATGATGTCTTCGGAACTGCCAAAAGAACCGAGACTGATGTGGCCTGGAAAAGGGAGAGAATAAAAACTCC
TGTTTAGATAATCTGAGGTTTTCATATTAAAAAGATTCAGGGCCAGGTGCAGTGGCTCACGCCTGTAATCGCAGCACTT
TGGGAGGCCAAGGCAGGTGTATCGCTGGAGTCCAGGAGTTCAGGACCAGCCTGGGCAACATGGTGAATCACTGTCTCTC
CTAAAAATTTTTAAAAAATTAGCTTGTGCAGTGGCCCATACCTGTAATTCCAGCTACTCAGGAGGCTGAGCTGGGAGGA
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CCTGCTTCTAAATAAATAAATAAGACTCAGGCTTGTTTTTGAATGACTATGATCAAAGAATAGCACTTTTAGAAAGGTG
AAATTTAGTTTGATACAAAGAACTTTTCAATATTTAAATCTTCAAACTTTTCAATATTTAAATTTTCGATATTTAAATC
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TGTTTTTCCTTCAAGGCTGTTCATGCATTAGGGGAAGACTGAATTTCCCATGGCTTCTAATGAACCTTTTAACTATGAG
GATCTGTTACATGAAAATTTTTTTTTTCAAGATGGAGTTTCGCATTTGTTGCCCAGGCTGGAGTGCAGTGGTGCAACCT
CGGCTCACCACAACCTCCGCCTCCCAGGTTCAAGCAATTCTCCTGCCTCAGCCTCCTGAATAGCTGGCATTAGAGGCAT
ACACCACTATGCACAGCTAATTTTGTATTTTCAGTAGAGATGGGGTTTCCCCATGTTGGTCAGGATGGTCTTGAACTCC
CAACCTCAGATGATCTGCCCGCCTCAGCCTCCCCAAGTGCTGGGATTATAGGTGTGAGCCACCGCGACCAGTGTTACAT
GAAAAATTCTTAGAATAGTGCTTGATGGCACCAAGTAAATGTTCAATAGATATTAGTTGTAATTGTTATCAGTAGTGAC
TATTCTATGCATTTGTAACTGATTATTTTTTGGATGGGAATAAGTAAAGGTGTTTAAAATGTTAGCACCGGTTTCTGTT
GCTAAATAATTAAGGTAGTTAGTAAGGTCTTAGGCTACTTGTAACTAATTTACTCTTAATTTGTCACCACTTTATGTTT

Fig. 9.247

TCCATTATTGCCTTTACATTCTATGTTACCTAGATTTGGGATTAATTCATCAAATTTAATATGAAAACTTTAAGTGACT
GCTAAATCACAATTGCATATATTAAATTATCTAGTGATAACGTAGCAATAGTCTATCAAGAAAGGAATGAATCATGACC
GAAAAAATGAATCTCTTTCATTAATTAAGAGAGATGTTTCAGTTTAGAAACTTACAGAATCTTAATGGTTAAGCTCTAG
GTGACGTTAGCTTCATTGGATTATTTTCTCAGGTGACAGATTTGCTACATCTTAGGATGGCAGCTAATATCTATTGAAG
GTATTCATTCATTCACTCACTTCCTAATTTATTTAACAAGCAGTGTACCAACCACTGCCCATGCCTGCACCTAGCTGCT
TACCTCTACAGAGTGTTTTCTACCCTTTTATCCCTTTTTGAGTCAGTCATCACAGGAAGACCAGCCTCTCAGTCATCCT
ATGTCCCCTATATCCCAACCCCAAGGGCTCCATGGCAGCAAAGCAGTCCCTCTTCTCACCCCATCCCTGAACTCCTTGG
GCTCCTTCCCTGCTGTATTTTCCTCTGTATCAGTTATCATTTCTCTTATATATTTTACTTACTATGTCCATTTACCTAT
CTCTACTGGAATGTCAGCTCCATAAAGGCAGGAATATTTGCATGTGTTCTATTTGCTACTGGGTACCCAGAGCCTAGAA
TAGTAACTTGATAAATATTTGTTGAATGAGTGAATAAGGCCTAAGTGTCATGGAAACTGATACCAGAAAGGTGTTATTT
CTTCCCCAGGGTTACCGAAGCCATTTATGGCAGCGCAGCATTGTGACCCAAAGTCACTTGGCTCTGAAACCAACATCCC
CATTCTTTTTTTTTTTTTTTTTTTTTGACAGAGTCTTGCTCTGTCACCCAGGTTGGAGTGCAGTGGCACGATCTTCACTC
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ACCATGCACAGCTAATTTTTGTATTTTTGGTAGAGACGAGGTTTCACCATGGTGGTCAAGCTGGTCTCGAATTCCTGAC
CTCAAGTAATCCACCCACGTCGGCTTCCCAAAGTGCTGGGATTACAGATGTGAGCCACTGCACCCAGCCCCAACATATT
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GACAATGATATTTCACTGCTGTATGGATTTAAATACAAGGAGACAACTTTTGTATCATTTACATTTAGGAGAACATTCA
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TAGATTTGGAGAAGCAATAATGAGTAAGCCTCAGTCTTTGCCTCTGAGATGCATTCAGAAGTGGTTGAGGCAACATTGT
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CTATTTAATCATCATTCCAGGGCAATAGCTGTATACTATTCAGACAAACTGAAGAGTAAAGTCCCCTAGTTTAAAAACT
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TTGTGGTTCAGAATTCACTTTAGGACAGAGAACATTAAAAATACAATAAAAAGCAGTAAATGATGGTGCAAGCTGAATT
AAGCTTGATGTGATGTTAGCCAGCCACAAGGTTTCCAACAGAATTACTGATATGATTTGGCTGTGTACCCACCCATATC
TCATCTTGAATCCTAGTTCCCATTGAATTATAGTTCATTTCTATAATTCCTATAGTTCCAATTTTATAGTTCAGCCAAC
AATCCCCATGTGTTGTGGGAGGGACCCGGTGGGAGGTAACTGAATCATAGGAGCAGTTTCCCCCATGCAGCTGTCGTGA
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CCCTGTGAAGAGGTGCCTTCTGCCATGATTGTAAGTTTCCTGAGGCTTCCCCAGCCATGCAAAACTGTGAGTCAATTAA
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CATTCTAAAGCAAAATGCCACTCCATTTAACATTCAAACAGCTTATAAAGAGCTTGGAAATATGAATTGTGTGGGCCTA
CCTGAAATTTCAATGAATGAGCATCATTTTATTCAGTTGGTTTTGTTGCTGCTTTAGCTCAGCCTAAACTTTGGATATA
TAATAGGTTTGTTGAGATAAGATTACCAGTAGCTAAGGGCTTTTGTTGGATGGGAGAATTGAAACCAGCATAATTTCCG
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TTTACATCTTTTTATTATTTTGTAAGACACTGTGATGACCTTCATGATAGTTAAATCTTCATTTGCACTGTTATTTCCT
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GAGCTTGATTAAATAATGGCATTATACTGAGCTTATTCAAGTATTTGGATAACTTTTCTTTACTGAACTGAAACTGATA
GCCCAGGCAGGCACATCTCCAACACCTCTAATTAAAATCCACATTCATCCCTTGCTTCCTGAGAAAAGATGTTGCTCTC
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CAGTTGTCAAATATTTATAATTATTATTCTTGGGAAAGTAACTGAGAAGGGAGTTCAGGAAAGACTTGGACAGTTCTTT
GGAGCATCAGGACCTTACAATTTCAGCTATCTTGTTCAATAAGCAAATGTTGTTTTAGGTTCCTGGATTACAAGGTCAA
AGAAGGCAGAATTCCTGCCCTCAAGAAAAGTCATGGGGAAGAGTTGTAAATGCATGAACAGCTATGAAACAGTGTGGTA
AAGTCATGTGAGTTGGCAAAATAGATGAGAGGCTTCTAAGTAAAACTGAGGAATGAAGAATGTTTTTTGGAAGAGATTA
CGCTTAAAAGGAATTAGCCAGCCAGAGAAGAAAGAGAAAAATGTTCTTGCCAGAGTACCTATCATTTGGGAAGCCCCAG

Fig. 9.248

TGGGCCAGAAGAACAGACTGTGTACAGGAAAGACACTACCAAGTGTTATTTGTGGCTGATACAGGAGAGGAAGGGAGAG
CAAAACAATAGAGCATCTCTGTGCTGAGTATTGGAATTTAAATTTTGAACTTCATTACTAAATAATGTGGAACTATTGG
ATAATTTCAAGCAAAGGACTCACATGTTCATGTCCTTGCATGAGTTTGCTAAGATTTCCATTTTAAGATAATCTTGGTA
GGTAAGTGAAGGATAGATTTGAGGAGGAAAAAATGGAAATATTAACTCTAGGCAAAACATAGGGGGAAAGATAATTGAG
AGAGATTAAAGAATGTGTAGAGAGGTAGAAGATATAGTCTGGTCTCTGGAATCAGATGAATTGGTTCCTAACTCTGACT
CCACCACTTAACACTCTATGTGACCTTGGGTATATATCTTATCCCTCAGTGTCTTGTTTTTCTCATCTGAAAAATGAGT
ATAATAATAGGGCCCAACTCATATTTTATGAGAATTAGTCAACCTGCCAACCACAGTGCCTAGCACATTGAATGCATCT
GATCAGTGTTAGCTATTATCTATTGACTATTAATATTATTGTTACTATCAATAGTATTCATGTCTCTAGGGTTTGTGAC
CTGATTAGCAGTTATTGTCTGGTTATTGGCTGAATGGTGGCCAGTACTAGGGAATATAAGAAGAAATGTGGGGAGAGGG
AGTGGAGGAGGGGAGGAACACAGTTGATTTGAATTACATTATAAATGCTCAAATGAACTAGCTATGGAACTTACAAGTG
GAATTTTCTCATGTGCAGCTGATGGTAACAGCAGAAAAATGTGAACTCTGAATAAAGAGGTGGGAGTTTTTCAGCACAT
AAAGAATATTTAAAGCCAATTCATTGGATGCATTGACCAGTAAGTGTAGAGATCAAAATCAAGAACAACTCCAAGAATT
GAGAGCAGATGCAAACCCCAATTTTTGTGGGTCTCCAGTCCAGGTATGAGCAGAAAACACGAGGGTTGGGGAGGGAAGG
AGTCTTCCAAGCCATAAGCCAGGGGAAATCGTTCAGTCAATTCTTATGCTCTGATGTGGTCATTAACAGATGATAACCT
CATCCTAAAGATGAGACTTCTTTAGGAACATCCTAAAGATGAGACTTCTTTAGGAACATCCTAAAGATGAGACTTCTTT
AGGAACATCCTAAAGATGAGACTTCTTTAGGAACATCCTAAAGATGAGACTTCTTTAGGAACATCCTAAAGATGAGACT
TCTTTAGGAACATCCTAAAGATGAGACTTCTTTAGGAACATCCTAAAGATGAGACTTCTTTAGGAACATCCTAAAGATG
AGACTTCTTTAGGAACATCCTAAAGATGAGACTTCTTTAGGAACATCCTAAAGATGAGACTTCTTTAGGAACATCCTAA
AGAAGTTCCTCCAGCATTTAAAATTGCTAAACGTAGGCCAGGGTAGAGTTAAAGGCTGAAAGAACCTTAATTAATATGT
ATTATTCCAGTTATTAGAAGAAAAGTCCTATGGATTGAAATTGCTGCTTGCTGGCAATTACTTTTAATTGCTGTGCAGG
GCATTATTAACGTTGCAACGTCTAGCATAGTGATGAAAATTGATGTTCCAGATGCTTTCATGTGAGTTCTCCTTTTCTT
TTAATGTTCTCAAGAGCATAGAATCATGGGGATGATAAGTGAGATTTTTGCTAGACTCTATACCTGTCTTCCATAGAAA
TCCCAGTATGCAAAAACAAACAAAACATAGATGGGTAATCATGGCCATTCCTTAATAAGATTTGAGCCTTATTTGGAGG
TAGGCCTGGTATGGATGGTAGCTCTAATCTTTAGATGAAATTAAACTCTCCAATGTGTTCTTATTTTCCTAAAGATCAA
GTCCCCAACTACCTCTCTCCAGCCCCAGAGAAAGGGAATTGTTGACGATAGAAAGATTCCATTTTCTTCCCTTAAGGGC
CACCTCCTGCTAGTTGGCCAGAGTTCTCACAGACTCTGAATTCTTGGCAGGCTGGAGTTTAACAGTAATCCTCTCTCAT
CCAAATTTAAGTACAGGTAATCCCCAGGAGCCCCTGCCAGGCTTTTGGTAAATAATTACCTGGGTACAAGCAAAAATGC
CCCTGCTAAGAAAACTCTGGAATTTTACCCATCATAGGACACATAGGTCTCTACCATAGAGGTTTATATCTTATTCTTC
AATTTCTGATTGTTACCCCTCCTAGGAAATTCTTATGTGAAGCAAATCTTATTCTCTTCTACTGGGCAATCTCCTAAAT
TAGCTGGCATGTGAAAATGCTTCATTGAGCTTTTGTTCTTCAGACTCTCAAATGAAGGAGTATGTCCAAAGAGCCTCTT
TATGCAAAATCTACAAATTACACCCCAGTCATACATCACAATTAGTTGGCAGTCATTAGGCATTACATCCATATTGTAA
AATTAGTGATGTTTCTCCCAAATTATGAAATATTATTCCCATTAAGAAAAAATATACTGAAGAGTAAAAACATAACAGAA
TTTTTGCTATATTTATTCTCTTCATAATTATGCAAATTAATAAAAAATTATTTACTATTTACTAACTTTGCATTGAGTGT
TCTCTCATTCTGATGAGACTCCAGACTTCTGCCTTTTGTACACCTGTGCAAAGCCTTTCTAAGCTGTTTATTTATGTCC
CAATATATATTTCAGTTCAGAAAGGCTGTTCTTACTTTTGCGACACCTTAATAGTAGTTTTATTTCATCAAGGAACTGT
ATGCAATCACTGGATATTTCAGAGAGCTGCCTACCTTATTTTCATACTATAAAGAAATAAACTTGAATAACAATGGATA
GTCTTGGCAGGAGTGTGGAGGAGTTGACATCTTCCAACATGACTGTGGGAATATGAACTGCCATAGCCTATTAAAGGGA
AAAATGTTCACAATTTGTAAGCTAGCAATCCATTTTCAGAAATACAAGCACCAATCAGTAAGAATATATTAGCAAATGT
GTTTATTGTTTATATGAGTCCAAAATTATATGTCCGTCAATAAAGGACTCATTGAATAAATAATGGTACATTTATGCCA
TGGAATCTTATATAACTATTGAAAAGAACTCACTAGGTCTCTGTGCATTCACAAAAATAATTTTTTCATGATTGACTTA
ATATTAATAAAGGATTATACATAGTATGAGCCCACTTTATTCAAAAAGGAAGGAGAATCCCTATACATGTGTGAGGGTT
TGTGTATTGTGTGTGGTATATTTATATTTGTATAAATAAAAAGTTTGCTGTCTTTTCCCTCCCATTAATCCTACCAAGG
AAGGGAAAAGACAGCAATCTTTTTTATCTTCACATTTCTGTGTCATTTGGCATGTTAAAAAAATAGCATGTATAATTTT
GTAATTGAAACCTAAAATATAAGAAAGAAAATTATTGAATAGAAATGGTAAATACTATGCAGCCATAAAAAAGAATGAG
AGCGTGTCTTTTGCAGGGACATGGATGGAACTGGAGGCTATTATCCTTAGCAAACTAACACAAGAACAGAAAACCAAAT
GCCACATGATCTCACTTACAAGTGGGAGATAAATGATGAGAACTCATGAACACAAGGAAGGACACAGACCCTGGGGTCT
ACTTGAGGGTGAAGGTGGGAGGAGGGAGAGAAGCAGAAAAGGTAACTATTGGGTACTGGGTTTAATATCTGGATGATGA
AATAATCTGTACAACAAACCCCCATGGCACAAGTTTACCTATGTAACAAACCTTCACATCTACCCCCAAACCTAAAATA
CAAGATTTAAAAAAAAGGAAAATTATCTACTCTTTCAAACTTAAAATTTCTGGATTTTAACAGTGTCTGCTGTTTAAAC
CCAAACAGTGTCTGAATTTGGCTACTGAAGAATAAAATGTAGCCCTTTTTCAGCACACTGTATGTTTACCCAGGTCCCA
GGATGCTTAAATAAACTGGCGTGTCTATTCAAATCCTGGATAAGAAATAATTTTTCAAAATAAAAATTATCTCACAGAA
TACTCTGAACACCTGCTACTCTCATTACCCTGAACACTTGTGGTTTTGTTGCTATAACTCTAGCAAATGGCATAAAGGC
TAGAAAAACTGTGGGATAAAGATACAGCATTTCTCTAAGACCCTGCTGCCTTCAGTAGAATTATTTAATATCCTTTCTA
ATTTCTCCAACTTATTTTTCACTGTTATGAAAAAACAGCTTACAAAGAATTAGTAACATTCACTATCAATGATTCCATA
GATCTTCGTTCAAAGTGCAGGTAGAAGGTGCATTTCTCAAAGAGTGTTTTAAACGAGGAAAAAAAATGTGTATCATCAT
CAACGTTTTAGTGAATAAAGACATTGCTTACCGTTTTTATGTTCCTGAGAGGCTAAGTTCAGTTCTATCATGAATAGTA
ATTTATGAATAAGAACCCACAATTTTTTTACCAGAGAATTGGAAAACCGCCCATAACATTTCCATATACCCATCTCATT
TTCTAAGTATCTATAACAGTTTAGTGAACAATATTCCCTCTTCGAAAATATAGCAAATAATTATTTCCTTCCTATCAGA
TATGCATGCTTTGTTTACAGGTAAATAACTCTGATTACCAAACTACTATTACATTAGGTTGATGTTCTTTTCAACGTTA
GACAAAAATGGATAAAACCTTGCTGCCTACTCAGAGATTTGGTCTGAGTGGAAATAGGCTTTTGTGGAGCTACAGAATT
TCTGCTTTATCTACTCAGCCAATAATTGGTCAGAGCATGAGCCTGGTTAGAAATAAGCAAAAAGCTTCTTGTATCCATG

Fig. 9.249

AACAGAATGAACAGAAAACAAGGTAGTACATTTAGCCTCCGAGAAACACGCGTTTACTTTTGAAGCAAAGAAGCACCGG
GCAACCAGTGAGCAGCATATGTCTGAAATCTATTATCTGACATGTTCTTTCCAGCCTTCCCAGGAATGCTGGTCTGACT
ACTCAGATTTGCTTTTACTTCTTGCCTTTTGGATATAATGAGTTTGCCAAGCAGCTGTGAGTACCTGACTCTGGGGAAG
GTGGCTAGATTCCGAAGCGCTTATGTTCATGGATCACCATACGCGATCAACATGCCAATTGATATTAAGCCACAGAGGA
GACGGTAACTGCTTTCCTTTCCTCTAGTTGTTTGTCAGTGAAAATGTGTTTTGTTGCCCTTTGGTAACTGCTTTGGATG
TCTGCTGAAATGGGAGGGTCAGGGTGAGAAGTTAGTTTTTATTCAACACACTGGATAGTTGGGAAAAAAATTAACCAGA
GAGGAAAGCTGGAAATAGTTTAGCTATTTAGCAAAAGCTGATCTGGTTTCAAGGTCTGTAGATTTTAAGAATTTGAGAG
ATTGTCAGTGCTTGTATTGCCATCAAAATCACCCATGATGAGAATTTGAAAGAGGATTTAGCCAAATAATGGATATATT
TATTGATGGCTATATGGCTGTTTATACCAGATGCCCAGTAACTCATAATCTACATGTGACATTCCTTAATGCATCATAA
CACATTAATGCAATAAATGAGTTATAATTCTACAAAAACATTTGTTTTCCTGTAGTTGCTAGGGAGGGAAGAACAAGGT
TATGTATTTTTCCTATAAAAAAGTTGTCATTTTAGATCTGTGTTCTACCCCCGACCCACCCTTTTTATGTAGTATCAGA
ATAGCGATGATATAGTTAACTAATATGTCCAAAAGTCACCCCTCAATTTTGGTTTTATACAACGTCATTTTCTTCAGCA
ATTAACAATGAACTTCAGAAGCATTTATAAAGATGTTCCATTCTCTCTGTGAAAATTCCATTTCTCCCTAATTTTATGA
ATCCACATAATGAAAATCCAAAATTCTAAAAGCAATGTATTTTACTTGGAAACTGTCATTACTATCTTACTCTTCTACT
TTTCTTTTTCTAATTATATCTACACAAACTCACAAAGCATGCATTTTGCCAGATTTCACCTTATTATAAACATGAAGGG
ATGTTTAAGTGATTAAAAAGTTTCTAAACCTTCAGAAAGCTTTCTGATTTTTGTGAGACAATATTTTATTCTTTTCTCC
AGAGTATCAAGGCTTTTCTGTCCAGCTCTATCACTATTTGACTTTATGACCGGCTAGCAGCACCAAGCAACTATTTTAA
AATACATTCAGAAAAGTGTGTCCTAAGACACCCAACATGGCTCAGTTGCTGTCAGTTACCTCATTCCCTTCTTTAGTTG
GTGGGACGATACTACAAATCCATACAAGTTGCAAAATCCACATGAATATCTAATGTCCCTGTTCATATTACCTTAATTT
TTCTGCTTTAAAGTAATCAACTTTTTGTACAAGTCAGTCAAATTATGTTTTTATGTATATTGTGTATATGCATAGACCC
AGAAAATTTCAGACATATACCTATTTAGGCTTAAAATTGGGCATCACAGTGTATTTTACAAGAAAATATATTTGAAAGG
CATTTTACAATAATTAGTATTTAATTGTATAGGTCTTGGGATTTGTAAAAATACCAGATCCATCTTTTCTTTCAGTAGA
ATACATTACTTACCTATGGCTAGTAAATCAATTAAATAAATTTTATATAAAAAGTTAACTTATTACATCTGGAGCTTTC
ATTCTACGAAAGGATAAATATGACAACAAACATGTAATGAAAACAATAGTTAGAGGGGTGGATGAATGAATGGAAGAAC
ATCCAAATCATAGAGGTTGTCTTTTTATTCTGTTACTCATTTTCTTAAGTTGTAAATTTTAAAACCTCAACTTCTTTTG
AATCTGTTGAGAAAACAATACACTTGGAATGGTGAGTCATCATCTTAGATTCACTAAAATCTACCTAAGTTTTGAATGG
TTCTTTTTCAGAATGCTTGCTGGGACTAAGATTTATCTAAAGTAGCATGTTTATGTTTATTTTCATATCATCTCGGTTG
TGGTTTTTGGCAGAAAGAAAATTGTTTTCTAATTACTTAAAAAAATCTGAGGAAGGAAGGATGGAAGGGAGGGAGGGAA
AGACATCTAAAGAAGAGTAGCTATGAGTTGATATTTCAGCCTACCCAAAGAAGCAGAGATTGCGGACAAAAAATAAAA
GATAAAAAAAATTGGCTTTTCACGAAAATCCATAGAGAAAATGAAGTAGGAAATCAAATGCATAAGTGCAAAACATAGC
TCGATTTAAAGCTAAGTATATCCTTATAAAATAATGACTTCTTGAAAGAACAGCATGTTTTTCTTGGAAAACAGGGAAA
TAATTCCCAAATTATTAGAAAATCACCTAGATTAGACACATGACCACATGATCATTTAATTGGTCTCAATTTTTATTTC
AAGAGCAGCAATGAAGACATCAAGAAAGCAGTTAACATACTAAATCTTAAGTAAACTCAATGTTGACGAGAATGACAAC
CCTACCATCTGTGATTATAATTACTTTCTATATTTGCGATTTAAAAATGTTTTCCTTTTAATTTTTGGTAGCCTCTGTA
AATTGTACTGTCCCACTTTTTCTTTTGTAAGAAATATAATTTTCTTTCAATTTTATGAAGCTTTTATGTCTCAATTTTA
GTATAGCAATTTCTTTTTTTTTTTTTTTTTTGAGACAGGGTCTGTGTCTGTTGGCCAGACTGGAGTGCAGTAGCAATCA
TAGATCAGGGCAGCCTAGAACTCCTGGGCTCAAATGATCCACTTCAGCTTACCAAGTAGTTGAGGTCACTGTGCCAGGC
TAATTTTTTTGTTTGTTTTTAGAGAGACTGGGTCTTGCTGTGTTGCCCAGGCTCTTCTCAAACAGTTGGCCTCAAATGA
CCCTCCTGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCAATCAAGCCTGGCCCTTCATACAGAGATTTAAA
AATCAGATTTAATCTGGCTCTTCTAACCCATCCTCACCCAATTGGACTGTAAAGTTTTTGAGTGTGTGGATCACGTCTT
GGTTGTTGTTACTTCCCCAGTGTCCAGCATAGAGCCCAGAACAGGTTAAATAATAAATGTTTGTTTAATAAATAAATGA
TTAGAAAATGCATGGTACATATTTTGGCATAGGGGCGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG
TGTATAAAATCACTTCCCTGTATGCCACAGTATGGAGTCTTTGGCAAGATTTTTGCTTCTGTTATTCATTTGGATCAAT
TAAATTCCCTTTCCTTGTTTCCCTGTAGAAACTGCATGTAGCACTGACTTTAGATTACTGGCTTAAGTGGTTGGGGATC
ATGCATTTTGTCATTACCAGGTCAGCAAAGGAGAACCTGAAATAATTCACTTCTGTATTCATAAAAGTATATATTTGTA
TATATGTAATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTATAGCTTCAAGTTGTAGAA
AGGAGGAGAAAAAGTCACTGTGGGAGGTGGCAGAGGGGAATTTCCTAGAGGGAAACAATACTGCAACTGTAAGAAAATG
TAAGAAATTTGATAGAAGCACAAAATTTCATAAAATCAGTTATAAAAATTATGACATATAAGCCCCAGTTCTGTTGTCT
TGCTATAATGTAAAAGTCACATTTTTTTTTAATCAAAATGGAAAATAAAAACTAGTAGCAGTGAATGTGGTGAGACAGT
AGCCACTGGCACCCCAAGGCAATGGAAAGCAAGTGCCCTTGAGCACTACTTTTCACAGCCGGGTGTCATGTTTTACCTC
ACCCAGCCGCCTTCTTCCCTGCATTTTGGTGGCTTGACACCATTACTGTCGGGGCAGGGTGGGGTGGTAGGGGGGTGCT
TGTGGGAGTGCTGGTGAGGGTCCTTCCCTTGCTGCCTGCTCTGTGCTCCCTCTTTCTGGTGATGCAGCTGTTCTGGTAT
ACTCTCTGGCCTCTGTTTTTCTAAATCCTTTAGGTAGGCTTGCTCTCCCTATTATCGCTGGGATCAGAAAAAAAGCAGG
GTACGAAGATCCAGAAGACAGGAAGGAATACAGTAAGTGTGAGTGAAGGTAAACCAGCCTGCTCTCTTCTTGTGGAACG
ATCACAAGGTCATGCACTTAGATTTATGACCAATCATCAAGCTATTAATTTACTCAAATGGTGTATTAATTTGTTAGGA
CGGTCATAAGAAAATACTACAGATTTGGTGGCTTAAACAGCAGAAATTTGTTTTCTCACAATTCCAAAAGCTGTGAAAT
CCAAGGTCAAGGTGTCAGCAGGTCTGGCTTCTCCTTAGGACTCTGGTTGTCTTGCAGATGGCCACCTTCTCACTGTGTT
ATCTCATGGCCTTTCCTCTGTGCGCAGGCATCGCTGGGATCTCTGTATGTGTCAAAATTTCCTGCTTTTATAAGGACAT
CAGTCAGACTGGATTAAGGCCCACCCTAAAGGCTTATTTAAATTTTAATCTCCTCTTTAGTGGTCCTATCTCCAAATAT
AGTCTCATTCTGAGATACTGGTATTTAGGGCTTCAGCATACAAATTTTGGGGTAGACACAATTCAGCCCATAACAAATT
GTGCTCATGAAATGATTTACTAATAATGATTGTGGAGAGAGATAGTAATCCGACTGTGAATCCTGAATAATTAGTGGCT

Fig. 9.250

TCATGTTCATAAAAGTGGACTCAATAATGGGCATGAACCTGCACGAGGGAGGCATTGCGGAGAAGAATACGTCCCATTT
TCTGTACCAAAGAAAAACAAGTACACATTGCAAACAATAAATCTTTATCAAATTCAACCACCTTATTTTGAACTCTATA
ATCATTCAAACGTGGCCTAGACTAACATTTGCTTTTTTATAGCTTTTATCAAGAGGAGTGGAGGTATTAAAATTATTAT
TGAGGGGTGTAGTGATTTTCAACTGACGCAATTCTACCCTCCACCTCTCATGCAGGGGACATTTGGCAATGTCTAGGGA
CTTTTTTTATTGTAATAAGTGGGAAGTAGCTGATGATTTCAAGTAGGTAAAGAATAGGGATGTTAAATCTCCTATAATA
CACACGACAGCCTCTCACAACAAAAAATTATTTGACCCAGAATGTCAGTAGTGCTAAGGTGGAAAAAACCTTATGTGAA
TCAATTAAATCAGGGAGAACTTCAGAGCTTTTTTAAGACCTTTATTTATATCTAGATGATTGATATTTTTTAGGTATTC
ATGAAAATACTTTCTTTTACCTTTCTTGTGGTAAGCACAAGATAACACTTTCTTGCCTGGTTAAAAATGGACAACTGCT
ACACTTTTAAAATAATATAAAGCATTCAGTAATTCAAACCATCCTGTCTTCTGATTTGTCTGAATTAGTGTGGCTTTAC
TGCATTTTCAGGGCTTATTATTCTTTCAGTAGGGAGACTACTAAGATTTCATTAAAGATAGCTGAATAAATGATCAAAT
ACATTATTGTAGCTCCAGACTAGGTAATAAACATTGAGATATGCTTTTCAAGTAGTGGTGAAAATACTAGGCAAAATTA
CACATACACTTACATATATTAAGCGACCATCCTGTTGGCCTGGTATGTGAAGCTCTGCTGAACTCTTGCCTAAATGCAT
GGACCCATCGATTGTGAATGTGTGACTACTTGTGTGTTTTCATCATAACCAGCTCATCCTAATAGCAAATGATATGGTT
TGGCTGTGTCCCCACCCACATCTCATCTTTAATTATAGTTCCCTTAATCTCCACATGCTGTGGGAGGGACCCTAGTAGC
AGGTAATTGAATCATGGGGGCAGTTTCCCCATGCTGCTCTCGTGATAGTGAGTGAGTACTCTGAAATCTGATGGTTTTA
TAAGCATCTGGCATTTCCCCTGTTGGCACTCTTTCTCCTTCCTGCTGCCCTGTGAAGAAGATGCCTTTCTTCCCCTTTG
CTTTCCACCATGATTGTAAGTTTCCAGAGACCTTCCCAGCCATGTGGAACTGTGAGTCAGTTAACCATCCTTTCTATAT
AAATTACCCAGTATTGGATATTTTTCATAGCAGCATGAGAACAGACGAATACAGCAAAGAACACGTTTTATGAAGGAAA
AACTTTGAAAACAAAGGGACTACTTTCTTTGATGAGAGGCCCTTCCTTTCACTTTAAACAAAACTTCAAATTATCCTCA
GAATTTGTTCTAATTCTCCCTACTTCTGGGTAAAAATTATTAGCAGTAACAGATTTAACTTGAATGTATATCTCCAGTT
CCCCATTCTCTTCTCTATGTAGTGCTGCCAAACTCAATAGATTTGAAACAAAAATTACCCAGGGACCTTCCCCATCTCC
CATGTCCTTTTTTCTTATGGCCCAGACCTGGAAGTCCTCCTAAGTGCTTCCTCTCCCTCAGCCTAACCACTCTACCACT
ATCCAGTTGCAGGTACACTCTTCCTCCTTCACCTCACCCTTTGATGCCATCTCCACTGCTACCATCTTGGGTCCAACCC
TCATGTTATCTTGCCTGAAAACCGCTAACTTTATAACTAGTCTCTGTTCTATCAACATCCTCTTCCTGACTGTCATCCA
CAGATCCACTTTCTAAAATGCCATCATGACGCTTCCATGCTTATACCACTAGCTTTTCAGTGGCTACCAAAAAAAAAAA
AAAAGGTTACATTCCCAGCCATCATGATCTATTCCCTTCCACATCTCTGCATCCTTGTAAATTGCCCTTGTCACCCATG
TATACTGTGTATTTTAGGTATAAATAACTACTAGCTATACCTATTTTTTGCCTAGAGTTCCATTCTCTCCTCATTTTGT
GATGAATCCCATCATTCCACAGATCTTTCCTAGAAGACCTTTCATAATTTTCTATTTCCAAATGGAAGTGCCTCCTTAA
CTAGCTGTTTTTCTTTTCTTCTGTGTCTGTTACTGCACTATCATAATAAATCTTAATTTATATATTTTCTATCTTTCCT
CCTCCCTAAGAGTGGCATGATGGAAAGAGTTGTTTCAGAAAAAAATTTGGCAATGGAATGCTGCATTAATTGGAATGGAA
AAGAATGAATCCCTACACCAACAGAAGGAAGCAGTGTGAAATCCTGACAGGGACAATTTCATTACAATTACAAAATACA
TAAATATGTGATTACAATTGTGAGAACTGCTCAAAAGGAAACAAGGACCCAGTGAGAGTATAAAAATAAGTACCTAACA
TAGTCTGAGTGTTTGGAGAATGCTTCCCTGGGGATGATGAGGCCTGAGGATGAGTAACAACATACTCTGCTGAGAACCA
CATGAATGAAGCCCTGATGTGTTAAACTAAAAGGATAAGGTGTCTGAAGTGTAATGAGGCAGAGAGGAGAGTGGCAAAA
ATAAACTGGAGAAGATGAGTAGGGGAGACTACTGTTTTCTTACATGCTAATTAACCCAATAATTCTTTATTTCATTTTG
GAGAGAAACAAGTGATTATTTATTAATTTATTCATTGGCAATGCAATTTAAAAACATATTCTTTGTGTCTTATTTATCA
TTGAGGTTTTTAAAACATTGAAATAAACAATAGGTAATATTTTCCAACTGAGATTTAAAAAAGAAAAAGGTCAGTTTTC
AAATCTATTCCCAACTGCTAGAGTTTAATAAAAACTGTCATAAATGTTGACCTTTGTTCTGCAATCAGTTCAGCATTTA
TCCATCACCCAACCATGCAGCCTCTCGCTTGCCAAAAGGAGTGGAATGAGAATTGTTAGAGTACTTGGAATGTTTACTG
TCAGCAAAGTACAAGACACTACACAATCTTGATGACCTTTATATGATAGTCCCATTTCTATATCCAATAAGAGACATTA
AATTACTTAATAATTCTTTGGAACTTTCTTTTTAGTTTTTCATGGCTTTGCTCTTAAGTTGAAGAAAATTATTACATGG
ATGAACTACAAACGGAAAGCTTCTGTTATCACCTTTTATCGTACTTTGTAAACTATGATAAATGAAGTGGCGAATGCTG
ACAAAGCATTCCAGGCTCAGGATGGCACCTTTCAAAGGCAAAAGAAGGTGAACAATCTACTAACAGCCTTTGAAACAAT
AGTCAGGACTTTGGACTTGGCCCATAATGTTGTGTTTCATATTGCCCTAAGAAGGTTGCTCTAGGAAGGAAAATAGTTT
AGTGGTGATGGAGAGAAGGGCCCCTAAGGGAAGAAATTTGATGAGAAGGATGTTACAGGTGTCTAAGGAAAAGGTAATC
AGCTCCTCAGACAAGATGGAATGTGCATTGAATTTGAAAAGATGGTCAGTGCTTCATTCATGTGGTTCTCAGTAGAGCA
TGTTGTTACTCATCCTCAGGCCTCATCATCCCCAGGGAAATATTCTCCAAACGCTCAGACTATGTTAGGTGCCTATTTT
TGTACTCTTACTGGGTTCTTGTCTCCTTTTGAGCAGTTGTCACAATTGCAATTACATATTTATGTATTTTATTGGCCTA
AGGGCTTCCTCCCACGTTCAATCATAGGACCATGGAAACAAGGTTGAAGCCTATGTTTTAAACCATTATGTGTCTGGTG
CTTTGTCTGGGTCCTGGTACATAATAGATATTCAATAAATTCTTGTAAAATTCATTTTTTTTCAACTGAGAGTACAAAA
GTAATCAGACAGTAAATATATGTGTACCCTTTTGGAGAAACATTAAATTCATTCCATTAGCAGGCAATGAGTTCTTTAT
TTAAAAAAAAGTTCTTTCAGCAACTTCCAAATGTACATCTCAAGCTCTGACCACTCCTCCCCCTTTAGACTCCTACTAAC
TGCTTGGAAATTATTTCAGTTGTTCTCATGGCCAAAATTGAACTCATCATCTTACTCTTACCATCTGGTCTTTTTCTTC
TATTTCTTTGTTGGATTGATTACTACAGAGTTATCTAAACTAGAAACACAGGAGTCACCTTAGTCATCTTCCTTTATCT
TAACACTGTCTCTCATCATCAAGTCTTCTTTTACCTATAATGTTCTTATATGAGTCCCTTCCACTCTGTCTTTATTAAT
ATTGCCAACTGATGTGAACTACTGTAAGAGCCTCTGAAGTGATCTCCACATTGCTGGTTTTCATATAATCCACCCCAAA
GGTCTTTGTGTTTGTTGGTTGGTTTTCATTGCTATAGCAATATTCACATTTCTGCAGTACTAGTAAATTACACTAAAAC
GTACTGTGTTTTATAATTGACCTCGAGTATAAACATACAAATTCTACTGCTCTGATGTTTCTTTCTAAGCAATGGTTGA
ATCAAAAAACAATGAATTTGCCTAATTTTCATGATGAAAACGTTCAAAATTCTCCTAAGATTTCTTGAAATCCAAGCTT
GTGATTGTATGAGAATTCACAATAAACCAGCTCACAAAATGTATAAACTTCAGTTTGTCATAGTCTATGAGGAATTACT
GAAGCATACGGCATTTACTCATTGATTTTAATTCAGGCAAAAGTTAGAAATACACAAACACATACGCGTACGGAGGTC

Fig. 9.251

TCAAAGTCAGTTGTGCGATAATAAATTATTTAACTCACCCTTATGATAGGTAAACAGTTTTCCTAAATCGCCCTCCTGC
CCCCTGCTACCCTGACTGAAAATATGTGCTCTGGTTTGTGCTGTTATTTTTGAACAATGTATGCCGGTATCCGATGTAA
GATGATTCATATGATACTGGTGTTACCATGGCAATCCATCATGTATATAGCAAGAACACTGTGAATACCAGCAGCTCTT
TGTTCTCTTCAAGTTTCCATTTTCTTTTCTTGTTTTTTTTTTTTTTTTTCTTGTGCAGTAATCCAGTGGCTATGACATC
AAGAGTAACACAATCTAATTTTCTCCTTCTGTTGCTTGTGGTAGGATTCATACTCTGCTAGCAAGGGAGTTCTTGGCCA
TTTTGATTTGCAAGAGATTTTGCTTCTCCCTGATGTTTCATTTCGTCAGCAAAGTCTTCCCTCTGGGGAAAAACCCACT
TGAATTCTAAGGCTGATAGATGCTGGGAATCCCATATGATGAGTCCTGTGGAAGCAGGACATTCCAGCCCTGGGGTTGC
TGTTGTCTCTGACTTCAGTATATGTTCAAAGTCATCTCAAAATAAAGTAGGAAGATGAGTGTTAACCTGCACATCACTG
GCAGTTTTTAAAGGTAAATTGCCATTTTTACTTACCACACTGGATTCTCCAAGTCAGACTAGGATTTGGGTTACAATGG
GGATCATTGGGGTTAAATTACTTAAGGGATAATGAGATTTACACAGACCCATTAATCTTTCTAAGCTATTGAGAAATTT
TACACGTACTGTGACTGAGGAGAACCTGATACTGTAAAAGAGCAATTCAGTACAGTTTCACCATCCAAGGACTTACCGA
TGCAAATTCAAATACACGTGCTAAGTAAAATGGGAGAGATAGAGCAAGGGAGATATAAAAATTCCAAYAGAGCAATTCC
AGATGCCCCATCTGCCACCACGTGCAATGGATCTATGTTCACTAGTAAGTGTGATTGAGGTAGGAGATGTGGATCTACC
ACTCTTCCCATCTCAGTTCCTTTGGTGAACTGTTGAGTGTGAACATTTTGCCTTACATTGGGTGATTCAAGGGGTTCTC
CACGGTAAAAGTGACTATGTCAGATTCTTGCCACATAATCTAAGAGATGACTCCACTGAAGTTTGTGTTACTCTACCAT
CAAAAGATGTATCTATGTTTACAGACATTCTTTTATTCAATTTGAAAAGAAATTTCAATGTCAATAATAAATATTAGCC
TCATTTGTGAATTAAACAGATGTTAAGATTGCATGCACGTCAGTAAAAAAACTGTTGTACAGGAAACTCTATGCACAGG
AGCCTCCTACCATGTCATCCAGCTCAGCTACCTTTTTCTATTCAGCTTTCTGCAAGTATTTATTTTATATAATGCACAT
GTAACTATAAGGATACAAACATGGATCATACAAAGAACCTGCCCTCATGGAGCTTAAAATCTAAAGACAGATGATAAGT
GCTAAACATAAATAACTGTCCACAACATTAAGATATCAGTAAATTCATTCATTCATTTAATTCACTCATACATTCACTT
GTGCAGCAAACATTTACTGAATAGGAACTGATTTCAAAATTTTCAGCTAGGAATGCAAAACTGAGAGAGAAAAATTCTT
AGCCTTCAAAAAAATCAAAGTCGAACTGCTCAGACAAAAATTCAAAGGGAAAAATAAATTATAACTACATAAGGACTTT
AATAGTCCTCTAGGAGTACATTAGACCAAACACCTACCACCAGCTGGGCTATTCAGGGATTATCTTACAAATAAGGTCA
TGAAAGAGGATGAAGTACTCTCCTGAAAGGCAGTGCCTAAAAAGAGGGTGGCTGGCAGAGAATGAACTCACATTACATA
GCACTTTGCAGTTTGCAAAGTAGATAGTCATATATTGTTTCCTTTGACTATCACATCAACTGATAAGAAAACTGAGACC
CAGCAGATTCAAAGGTCTTACTGAAGACCATAAAGTTAGTTAAATGTGGCCAGGTGCAGTGAGTGACTCACACCCATAA
TCCTAGCAGTCTGGGAGGCCAAGGTGGGCAGATCATTTGAGGCCAGGAGTTTGAGACCAGCCTGGCCAACGTGGTAAAA
CCTCTACTAAAAATCCAAAAATAAAAATTAGCCAAGTGTGGTGGCATGCACCTGTAATCCCAGCTACTCTTGTGTCTGA
GGCACGAGAATTGGTTGAACCTGGGAGGCGAAGGCTGCAGTGAGCTGAGATCGTGCCACTGCACTCCACCCTGGGAGAC
AGAGTAAGACTCTGTCTCAAAAAAACAAAAAAAAAAATTGTTAGGTAAATCCTGGAGTTGGGACCCAGGCACCAGTCATC
TGTTCTCTAAATATTGTCCCATGTGTTCTGTTAAGTACCATGGAGAAAGCAGGAGTAAAATATTTTGGCAGCTCTGAGA
AGGGAGAATTTACTTTCAACTGGGAGTATCAGAGAATGCTTTGTAGATAAAATGACATTTGGTCTTGCAGCTTGCATTC
AGTTATGCAGAGTTGAAGATGAAGGGCATTTCAGGCTGGGAGAACAATCTCACAAAGGTGTGGATGTAGGAAAATACAT
GAACGTTTATAGAAAAAAAAATTGAGTGTGGTCAGAATTTATTGAACTTGAGAGGCAATCATGTAGATAGGAGATAAAAC
AGGAAAAGGAGAATGAGACTATATTTTTAGGGTCATGAAAATTAAGCAAAGGAATATTTTCTAAACTAAGGTGAGCTAT
TAAAGATTTTGAAGAGAGGGAGTCCTATGATCATAGCTTTGCTTATGAAAGAATGAAGTGGCAGCAATGAAGACACACC
TTGGAATACCAGAAGACTAGAGTAAGGAGACTAATGAGGGGACTTATAGCAATCATTTGCTTTGCAGGTAATAAGGTGG
TAACTAATACAAGATGATGGATTACAATATTAAATTTTGTATTCTTTTAAGTTCTATGTTTCTGCAATGGCTAAATGCA
AACCTATCAGGAAAAGTAAAGCGTTTTGTTGTTATTGTTGTTGTTTTTGCTTTTCAAAAAGTGCAGGTAATTAGGGCCT
AACGTGGAATGGTCCATGCTAGGAATAAAGTAGATAGCGGCGAATGTTTGCTAGAGACATTGTGATGGACTGATCTGCC
CTACTATTACATCCTCAGCAATAAATATGAATGTTTAAGTGGTACAATTGCCAGAAATCAGCCAAAGTTTGGCATAATT
GTTAGAGATTTGTTGGCTGTGGATAGAACTACATAATTTTGGAATTGTAGAGGAGAACAGAGAAGAAACCAACAAAAAA
TAGTACTAGTACTCTGTCACTGGAAAGAAGTATGTTTAAGGCCACACAGTGAAAGTTAGCCATGAGCTTGAGTGCTCTA
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GAAGTTCAATAGGTGTACAGTTGTTTTGTTTGGCTAGACATGGATATTTGTGTGTTATTCCCTTTCAGTAGTTCTGAAA
ACCATTTTATCTTTAGATACATTATTTTCCCAGGAGCTTGGGTATTTTATTGAAGCTGTTTCAAATGCATTTAATGTCC
TTTGTAATGGATTTCTTTATCTCTTCCCCAATGCTCTTGGCTGGAGATGTTACTTTTTATTTGCCTTATCGGTGTGAGC
ACCTCATTGCTATAATCAATAGATATAGTACTTTAGCATTCTGTACATTTTAATATGATATATACCAAATATAATGTAT
AAATGAAAAGTTATAGATAATTTTTGCTTAAGTTTTCTTTTATAGAGAATTGTTAACAAAGGATATACAGCCAATATGT
TAAAATAATACCTAGAAATTAAAAAGGAGTAAAGTAGAATAGTTTATCTGTTGTACTAAGACTTCATACACAATATTTC
GAAAAGTGGGAATATCTCTTGGGTGAAATACTTCATATATGTATTGTATGTACATACATGCAATATGTACACACAGAAT
TATATAAAATATATGTATATGTATACATCTATATGTACAGAACATATAATTTTATTAGCATTTCTTGTAATGGCATTTT
ATTATAAATCCAATGACCTCAATTATTCTATGGGTAAGTGCTAAGTATGTCAAGAGAGCTGGCATAGAAAATGGAAAAA
GCACTACACCCCTTAGCTTGCAAGTAGATGTGAATTTTCTGCCTTTGACTTTGTTGAATCTGTGATGAATCATATGTTT
ACTCTGATTAACATAAAACATCTGGATGATCTAACTTTGGGGACACATTGCTTCATATGCACTGAATGCCTGAAAATTG
GTAGAATTTTAGATTCTTTTTCTTTATAAATGATACTACCCGAATTCCTGCAATACCTAGAGAGTTACAAGTGCTTAGC
TCTGACCTTTTATTCCATTCAATTGAAGTTGTCCACCTTTAGTTTATTACACATATGACTCTTAGTAGAGCAAACATCT
GGATTATTGTCAACAGTTCTCAAACACACCATTTGGATTTCACTATCAGACTACGAACGAACCCCCATGGAAAAAAATT
CAGGCATACAGGCTACACCCAGATCCTGAATAGCCCCTGGTTTTCTGGTTACTATTTTCTCAGGCCAGATCCAAGAAGT
CCTCTTTGGGCTTGTCTCTGGATTCTCTGATAAAATTGGCTTTAGATTGAGACTGACGTGAAGATAGAGCTGGTCATT
GAAAGACAGAAACAGATGTGAATGAAATAATTCTCCTTTGAGACATAAAAAAATGTAAGATATACCAAGAAAGGGGAAT

Fig. 9.252

TTGAGTTGTTCATTTTCTGACAACTGTGAAATTGTTGACCCGGACAAGAGAGTAGGGAGATTAACAATGTGATCATGTT
CAGGGCCCACTGTGCCACTGAATTAAGACAATGTTGGCATTCTCCTCAGTCATCTTCCGAAAATAGAGATTTAGAGTTA
GGAAAGGAATAGCCTATCCCATTAACTACGTCACTCATCTCATGCAGGTGACCTCTCATTTATGTATTTCTCAGGATAT
AGACCAACGCTGGAGTATAGAAATATTATGAGACACTTCGTAATTTTAGGTCTTCTGGTACCACATTTAAAAGGTAAAA
AGAAATAGGTAAAATTTATTTCAAGGATATATTTTATTTAACTCACTGTATCAGATTATTTTAACTTGTAAACAATATA
TATAATTATTAATGAGATATTTAACATTCTTTCCTCATACTTTGTCTTTGAAATCCTGTATGTATTTTTTACTTACATC
ACATATTAATTTGGATGCCCAATTGTCCTCAATTATACTGGATCTTTATTGGACATTTAGATCTCATAAGATTTACAAT
TAGAAATATAGATTCACTTCCCAAGTTGTTCCAAATATAGTATTATTAAATCAACTATCAGTCTTTTAATTCATAAATA
TTAAGTAAGACTAAAAATTTAGTCCTTTAGTCATACTAACCCCCTTTCAAGTGCCCAACAGCCTCTTGTGGCCATTGGC
TGCCGTATTAGACAGTTCATATTTAGATTATCTGGGTTTGAACTCAGAGTCTGCCACTCACTGACTGTATTGGCAAGTT
GTTGCCAACCTGGGCAAGTTTTTTCTCTTTTTATGCTTCAGTTTCCTCACCTGAGCACACCTTTTTCCTTGAAGAAGCT
CTCCTGAAGAAAATCCCGTATTTTTCTTCAGGACATTGCTATTTTTCCACTTAAACTCAGAACCTTAGAGTGATCACTG
AATCCTCCTCTCCCTCATCAGCTTTATCTGCCAGAAGGTCAAGTCCTCTGAGATGTACACTGTAAAATCTCATGCTTTC
CTGTGACTTCATTTCCACTGCCACTACCCTCTCCTTTTGCATGGATAGCTGCAATGATCTCCTATTTAATTAGCCTCAG
TCTCCAGACTCTAGCCATCACTCCACATTATGCCCTCTGGATGCTGCTACTGAGTTCATTTTCTGAAAATGGTATCTTT
ATCATACTCTCCACAGTTCAAACTATTTCTTCACTGCCCGTCACTTCCAGCATAAATCCATGTCCTCTGTGAAACCTTT
TTTGACAACTTCCATGCCAGATCCAAATGACAACTCCCTTCCTTGTGCTGTCATGGCCCTCCACACAGACTTCTGCCAT
AGCCCCAGAGTCCTAGTCCACATATAGGAGTACATGGGCTCTAAGCCCTACACAGACTATTTTGTTGTTGTTATTTTTG
TTTTGTTTTGTTGTTTGTTCGATATCTTGATATCTCTGTAACAGAGCACAGTGGTTTCTTGACAGTTTCTCATTTTCTG
TATGAGCTAGTGAATGACATTCCTTTGTCTGGCATTCCAGGCCTTCAGAATTAGCTCCACTTGACTCTTCTGGCTCCTT
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TGTGTCTCCATGCCTTGGCTCGCATCCTCTCCTCTTCTGAAGTGTCCCTGCATTCTTCTTGATCTGCCCAAATTCTACC
CTTTCTTCAAGGTCCAGTCCCTCCCTCTTCCATGATGAAGACTGCGGAGCATGATGCAATTCACTGTGTTTCAAATTCA
GGATTGGGTGGCCTGATGGAAGGAGGCCAGGCTTGGGGTCCAAGTGGATCTGTTTCTTCTGTTTTCCGCCAAGTTGCCT
ACCCTCTCTGAGGTTCACATTCCATATCTTTGAAATCACAGTAACAAAACATAAGGTGCAGAACTATCTTGAGTATTAA
GAATAACGTGTGCACTGGCATTCAGTGAGGGTTCAGATGGAGCACGTGAACTCTGTTACTTTCAGTACAGTCATAGGAT
ATGTAATCATGTAGCTTCTAAAATGTCTTTCATTGTAAGATTTTGTTGTCATTTGGATTGCTATACAATTCATGCTTGA
TTTCTAAACTAGACTGCAAGTGTCTGGACTGAAACAAATGCATAATAGAATTCTGAGCAGATATGCACAGATATATATA
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GACTTGAAGAGTTTGAGTCCTTCCCAAATCAGTCCAACTCTTAAAGTGATAGAAGCAAAAAATTCACAGTGTTTACACA
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CTGCCTCCCGGGTTCACGCCATTCTCCTGCCTCAGCTTCCTGAGTAGCTGGGACTACAGGCCCCCACCACTACGCCCGG
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CGCCCACCTTGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCGCCCAGCCAACCATGGCATTTTTTGTTAG
GTCACTCAGCATTGGTATCAAGAATAACAAATGACACTTGAGTTTCTTTTTCCTGAAAAAGGGCAGGAAGAGTCTAATA
GCAAGTGCAATTGCCACAGGCAACAGTGTTATAACTGGAAAATCCTAAAATGTAGATAATTTTCCTCCAAATGCTTTCT
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AGGGATATCAGTTATGACTTCTCATTGAGTAGTCTCATGTTAGACCAAAATAGTTTCCCATATTTTGGTGAAGGACCAG
AATAACTTACCAGTAAATGAAACAATCATTTTCTTTTTGCTTTATACTCATTCTGCATGTGATTTGTATAGGGGATCAA
GTCAAAGATTGCCAGTACAAAGTAACAACCTCTCATTGTATTGCTTAAGTTAATCATTAATATTTTCCATGGATCAATA
CCCTGTAGAAGCATGAGATGCAGCAGTGATCTTCAATTTCATGTGCTTGCCAAGTAAGAACAGCCATGGGCCAGATTGT
TGGGAGCCGTGCCATGAGCTACAGACCCTCAGCTCCCCTCTATAATCAGTTCTTCCCCCACTCCAGTGCTCCCAACTTG
CCCTAAGCAGAGCGTAATTGTGGATGTGTAACTACCGCAGAGGGGAGTATGCTTTTTATGTTGTTCAATTCTTCACTTT
CTCTTCTGCAATTGAAAGTTGAGCTGTTAGATTTCCTGAAATGAAATGGTGACAAGAGAAAGTAACAGAAGTAGCCTTT
ATAAGTGCCTGACTTCTGGGTAACAGAAGTGACTTAAAAAAAATAAAAGTACAAAACGTTGCATTTAATGTAAAAGATG
ACTGCATTAGTACAACCCTTGAAAACATTCAAGTTCTTTTCAGAATAACCACCATTAAGGAGTTGACAAATATTTTATG
CTTTAAAGTATCCTATAAAAGTTCATCACAGAAATAAAAAGCCTCCTGTTCTTATCCTTCTCAACAAAGCCCTCTTGTA
TATAGATATTGAGTCTGGCTTACCTCTGTATCCTGTTGTGCTGATAAACCAAGAACCTTGCAAAAATAGATGCACGATA
ATTGATATTTAATAAGTGAGCGAATCCATTAATGAAAAGAGTGCTATTTCAGAGAGCAGTGTTCATTTAGATAGATGGT
CCCAGCGTCATTAAGTAAAAGGATAGAGAATACTTGCAATACATTTGGCGTAGTGTTAAGAATTTTTTAAAATGTTTTA
AATGTGATCTTTTTTATGGGCTGAATTGTGTCCTCTCAAAATGTTGAAGTCCTAACCCCTGGTACCTCAGAATGTAACC
ATGGAGATAAGGTCTTTAAAGAGGTGATTAAATTAAAATGAGGTCTTTAGAGTGGCCCCTAATCCAATCTGAATGATAC
CTTTATAAAGGGAGGGAATTTGGACTCACAAAGAGACATTAGACACATGCACACAGAGACAACCATGTAAACACATGGT
AAGAAGGCAGCCATCTGAAAGCCAAGGAGACAGGTCTCAGAGAAACTAAACCTGTTGACGCCTTTGATCTTGGACTTCC
AAACTGTAGAACACTGACAAAACGTATTACTGTCGTGTAAGCCACCCAATCTGTGGTATTTTGTTATGGAAGCCCTGGA
AAATTAATACAGTCTTTTTTATTTGCTACCTTTGAAAGCCCTCTTGTCAAATGACGGTAAAGAATAGAAGACAATAAAG

Fig. 9.253

TGTCAGTAATAAAGGGTGACGAGAAGAAACAACTAGAGATGTGAGAGGACCAATTTAGGAAATGGAAAGGAGAGGAAAA
AATCAACAAAGTTGAGAATGCTAATTACAAAGTGCCCACAGAGGAGGGCAAAACCAGCAAACCATTCCCTTTGTCAAAA
TCTTGAAAGATGGCAATTGAGGAACCAAGAATCTTAAAAAGGGGGAAGGTGGATGAGAAATCTGCATATGAAGGGGAG
TCCTCCATAGGTTCTCCTCTCACCCTGCTCAGCTAGGAGACCAGTGCCACTTTATCCTCATTAGAATGGAAATTTATGC
TATAAAAATAAATAAGAGAAGTCTTAACCTGGGGATACTAGGCACATTGGAAGGTGAGAGAGTAAATGAAAGTCTATCA
ACTGAATAGTGAAGTTCTGACTTCTCTAGTAGCACCTGGGAATAAGAACTCTGTCAGTTAGCCTTATAATGCCAAGAGA
GGAGATAGAAAAATTGTTTTCTATAAAAATTGTCTAAAAAAATATCTGCACTCCCATGTTTATTGTAGCACTATTCAC
AATAGCTAAGATTTGGAAGCAACCTAAGTGTCCCATCGACAGACAAATGGATGCAAAAAAACATGCAGTACCTATAAAC
AATGGAGTACTATTCAGCCATAAAAAAAGAATGAGATTGTGTAATTTGCAACAGCATAGTTGGAACTGGAAGACATTAT
GTTAAATAAGCCAGGTACAGAAAGATAAACTGCATATGTCCTCACTAATTTTTGGTAACTAAAATAAAAATACTTGAAC
TTGCCAGGTTCAGGGGCTCACGCCTGCAATCCTAGCACTTTGGGAGGCTGAGGCAGGCAGATTGCTTGAGGCCAGGAGT
TCAAGACCAGTATGGCCAACATAATGAAACCCCATCTCTACTAAAAATATAAAAATTAGCCAGTCATGGTGGTGCATGC
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CACTGCACTCCAGCCTGGGTGATGGAGTGAGACTGTCTCAAGAAAAAAACAAAACAAACAAACAAACAAAACACTTGAA
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GATAGCATAAGAGGGTGACTACAGTCAACAATAATTTATTGCATATTTAAAAGCAACTAAAAGAATATAATTGGAATGT
TTGTAACACAAAGAAATGATAAATGCTTGAGATGATGGCTCCTCCATTTATCCTGATGTGATTATTACACACTGTATGC
CTGTATTAAAATATTTCATGTGACCCATAAATTCATATACTTACTATGTACTCATAAGAATTAAAATTAAAAATAAAAA
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TGAGAGCAGGAGTAAGGGGGTTGTGGGAGTTAGCACACACTTTTAAACAACTAGATCTCAGAGAGCTCATTCACTCACT
CACCAAGCCATAAGGGATCTGCCCACATGACCCAGACACCACGCACCAGGGCCCATCTCCAACACTGGGGATTACATCC
CAATATGAGATTTGGAGGGGACACCCAAACTGTATCATTCCGCCCTTGGCCCCCTAAATCTCATGTCCTTCTTACATGG
CAAAATGGAATCATCTCTTCTCAACAGTCTCCCAGAGTCATAACTCATTCCAGCATTAACTCAAAAGTCCCAAGTCCAA
ATACAAAATCTTGTCTGGAAATGAGTTCCTCCCACTTATGAGCCTGTAAAATTAAAACAAGTTATTTACTTCCAAGCCA
AGGTACAATAGAGGTACAGGCATTGGGTAAACATTCCCATTCTTTTTTTTTTTTTTTGAAATGGAGTCTCGCTTAGTCA
CCCAGGCTGGAGTGCAATGGTGCAATCTTGGCTCACTGCAACCTCTGCCTCCTGGGTTCAAGCGATTCTCCTGTCTCAG
CCTCCTGAGTAGCTGGGATTACAGGCACCCGCTGTCATGCCCAGCTAATTTTTGTATTTTTGTAGAGATGGGGATTTTC
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AGGCATGAGCCATCATGCCTGGCCAACATTTCCATTCTAAAAGGAAGAAATCAGCCAAAAGAAATGACTTCAGGCCCCA
CCCAAGTCTGAAACACAACAGGACAGTCATTAAATCTTAAAGTTCTAAAATAATCTCCTTTGACTCCATGTCCCACATC
CAGGTCACACTGATGTAAGGGTAGACTCCAAGGCCTTGGGCAGCTCTGCCTCTACAGCTTTTGCAAGGTGAAGCCTCCA
TGACTGCTCTCATGGGTTGGAGTTGAGTGCCTACGGCTTTCCCAGGTATAGGATGCAAGCTGCCAGTGGATCTACATTC
TGGGACCCACAGAACAATGGCTTCCTTCCCACAGTTCCACTAGGCAATGCCCCAGGGGGGATTCTTTGTGGGCAGGGCT
TCAATCCCATATTCCCTTCTGCACTACCTTAGTAGAGGTTTTCTGTGAGGACTCTGTCCCTGTAGCATGCTTCTGCCTG
GACACCCAGGCTTTCTGATACATCCTCTGAAATCTAGGCAGAGACTAGGATCACTCTTTCCATTCTTTCTATCTGAAGG
CTTAATACCACAAGGAAGCCACAAAGGCTTACAGCTTACATGCTCCAGAGTGGCAACCTGAGCCATACCTGAGGCTCTT
TGAGCCACGGCTGGACTGGATGGACCATGATGCAAGGAGCAGCCTCCTGAGGTAGACAGTGTAGTGGTGCCCTGTGCTT
ATCCCCTAAACCATTTAGTCCTCCTGTACCACTGGGACTGTGGTGGGAGGAGCTGCCTAGAAGATCTCTGAAATGCTGT
AAAGGCCTTTTTCCCATTATTTTGGCTATTAGCACTTGTTCTCTTTTAGTTATGCAAATTTCCCTAGCAAATGATTGCT
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TTCAAACTTTCACAGGTCCCTGGGCATGAATATAATGTAGCCAAGTTCTTTGCTAAGGTATAACATGGGTGACCTTTGC
TCCAGTTCTCAATAAGTTCCTCACTTACACCTAATACTTTGTCAGCACGGACTTTACTTTGCAGATCACTATCAGCATT
TTGGTCATGACCATTTAATCAGTCTCTACCAAGTTTCAAACTTTTCCTCATCTCCCTGCCTTCTCCTGAGCCCTCCCAA
TTCTTCCAACCTCTGTCTCTTACCCAGTTCCAATGTCATTTTGACATTTTCAGGTATCTTTATAGCAATGCCCCACTCC
TTGGTACCAGTCTTCTATATTAGGCTGTTGTGGCATTGCAATAAAGAAATATCTGAGACTGGGTAATTTATGAAGAAAT
AGAAAATTAACTGGCTTGCAGTTCTGCAGGCTGTACAAGCATAATGCCAGCATTTGCTAAGCTTCTGGAGAGGCCTCAG
GGAGCTTTCAATCATGGTGGAAGCTGAAGAGAGAGCAGCTATCTCACGTGGCAATAGGGGGAGCAAGAGAGAGAGAGCGGG
AAGGAAGGTGTTACACACCTTTAAACAAAGAGATTTTATGAGAACTTGCTCACAAAGCTATAAGGGAACCACTCCCATG
ACTCAGACACCTCCCACCAGGCCCCACCTCCAACACTGAGGATTACATCTCAACATGAGAATTGGAGGGGACATTCAAG
GAACACCACCCTATAATGAACCCCAAGACTCTACAAGTCCAGTTAAATCATTCAAGGCTCCCAGTCAGTATTTTAGTGT
CTCCCTGTTGAATATGAATAGATAGCCAAGTCTCCACAAAACTCTGAGGAAATTCTTCAACAAAAAGCCTAATGCAAAC
AAATGAAAATAATGATGATGATTAGGTTGATATAAAAAGAGTTTAAGAAACAAATAGACGTTTCAGAAAAAAATAAACTT
CGTAGCCCTAGACAGATGACAAGTTATCACATTAATGAAACAAAAGGATACTATACAAAATTATCAAGTAAGAACAAAA
GAGAGTTAGAATTTAAAACAATGAAAGAAGATGCTAATAAATAAAATCAGAGATGAAAAGGGAGATGTTGCTGGGCACA
ATGGCTCACACCTGTAATCCCAGCACTTTGGGAGGCCAAGGCAGGCAGATCATGAGGTCAGGAGTTTGAGACCAGCCTG
ACCAATACGGTGAAATCCCATCTCTACTAAAAATACAAGAATTAGCCAGCGTGGTGGCACGTGCCTGTAATCCCAGCTA

Fig. 9.254

CTCAGAAGGCTGAGGCAGGAGAATTGCTTGAACCTGGGAGGCGGAGGTTGCAGTGAGCCAAGATTGTGCCACTGCACTC
CAGCCTGGATGACAGAGCAAGACTCTATGGGGGGGGGGGGGGGGAAGGAAAGATAAGGAAAGATAAGGGAGACGTTACA
AGCAATACCACAGAAATTCAAAGGATCATTAGATGCTACTAGGAGCAACTATATGCAAATAAATTGGAAAACCTAAAAA
AATGATAAATTCCTAGACAAATACAACCTACCAAGATTTAACCATGACGAAATCCAAAACCTGAACAGACCAATACCAT
CAAGATTGAAGCCATAATGAAAAGTCTCCCAGTAAAGAAAAGCCCAGGATCTGATGGCTTTACTGCTTAATTTTGCCAA
ACATTTAAAGAAGTAATATCAATCCTACTCAAACTATTCTGAAAAATAGAGGAGGAGGGAGTACTTCCACACTTATTGC
ACAAGGCCAGTATTACCCTCATACCGAAACAGACCAAAGGCACATTGCAAACAGAAAACTACAGGCCAATACTCCCAAT
GAACATTTATGCAGAAATCCTCAACAAAATACTAGCAAGCCAAATTCAGCAACACATTAAAAAGATTAGTCATCGTGAC
CAAGTGGGATTTTTCCCAAGGAAGCAAGGATGGTTCAACATAATGTAAATCAGTCAGTGTGATACATCATATCAATGAA
GGACAAAAACATATGATCATTTCAATTTATGCTGGGAAAGCATTTGATAAAATTCAACATCCCTTCATGATAAAAACTC
AAAAAACTGAGGATAGAAGGAACATACCTGAACACAAGGAAAGCCATATATGACAGACCCACAGCTAGTATCATATCGA
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GAGAATGAAAGGATATTCAAATTGGAAAGGAAGAAGTCAAGTTATTCTTGTTTGCAGATGATATTATTTTATATTTGGA
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AAGAAATTAAAGAGAACACAAAAAATGGAAAGATATTTCATGTTCATGGATTGGAAGAATCAATATTGTTAAAATGTAC
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TCATATTACCTGACTTCAAATAACACTACAGAGCTATAGTAACCAAAACAGGATGGTTCTGGCATGAAAACCCAGGAAC
AAATTCATACATGTACAGTGAACTCATTTTTGACAAAGGTGCCAAGAACATACATTGAGAAAGGACAGTCTCTTCAATA
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CAGTGGTGTGATCTCAGCTCACAGCAGCCTCTGCCTCCTGGGTTCAAGTGATTCTTGTGCCTCAGCCTCCTGAGTAGCT
GGGACTATAGGTGCACACCACCATGCTGGGCTAATTTTTGTATTTTTAGTTGAGACAGGGTTTTGCCATGTTGGCCAGG
TTGGTCTCCAACTCCTGACCTCAAGTGATATACCTGCCTAGGCCTCCCAAAGTGCATGGATTGCAGGTGTGAGCCACTG
CGCCTGGCCTGAGCAAAGATTTTTTGAGTAATACCCCACAAGCACAAGCAACCAAAGCGAAAATAGACAAATGGGATCA
CATCAAGTTAAAAATACCTGCGTAGCAAAGGAAACAGTCAACAAGGTGAGGAGACAACCCACAGAATGGGAGAAAATAT
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ATCCAATTAAAAATGGGCAAAACACCTGAATAGACATTTCTGAAAAGAAGACATACAAATGGCAAACAGTCATATGAAA
AGGTGTGCAATGTCATTGGTCATCAGGGAAATGCAAATCAAAACTGCAGTTAAATATTATCTCACCCCAGTTAAAATGG
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ATGTAAATTAGTACAACCACTACGGAGAACAATTTGGAGGTTCCTCGAAAAAGCTAAAAATAGAACTCCCATATGATCC
AGCAATCCCACTTCTAGGTAGGTATACACCCAAAAGAAAGGAAATCAATATATCTGCACTTCCATATTTATTGTAGCAC
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CACAATGGAGTACTGTTCGGCCATAGAAAGAAATGAGATCCTGTCATTTGCAACAACATGGATGTAACTGGAGGATGTT
ATGTTAAATGAAATTATCCAGGCACAGAAAGATCATCTTCACGTATTCTCACTATTTAAGGGAGCTGGAAATTAAAAGA
ATTGAGATCCTGGAGATAGAGATTAGAGTGATGGTTACCAGAGGCTAGGAGGTGTAGTGGATGGAGGAAGTAAGAAGT
GGGGATGTTTAATGGGTACAAAAATATAATTAGATAGAACAAATAAGATCTGGTATTTGATAGCTCAACAGGGTGACTA
CAGTCAACAGTAGTTTATCATACATCTCAAAATAACTAAGAGAATATAATTGAATTGTTTGTAACTTAAAGGGTAAATG
TTTGCAGTAATAGATTCCCTGTTTACCCTGATATTATTATGCATTGCTTGCCTGTATGAAAATATCTCGTGGGCCCCAT
AAATCAATCAATCTATCTATCTATCTGTCTGTCTGTCTGTCTGTCTGTCTGTCTGTCTACCTACCTACCTATTATGTAC
CAACAGAAATTTAAAATTTAAAAAATTATGTTTTGGAGACGTCTAGAAAAATTGGTGATAATGTCACATAATCAAATAA
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TCAGTAAACGTTACTTTGCAGGGATGATACAATAGAACACTGAATGTTTATTTAGCCAATAATTGTTATATAACTGTAA
TGGGAGGATAGAAAGAGGGAAGTAGAGAGGTGAAATGGTGAAAGAGTGTGAAATCTTCATCATTCATAATAGAAAGTCA
GTTAGAAATATGGAATTTAAAAAAAAATAGTTTGAGAGCCTTATGAAGAGGGTGGCACAAAAGACTCCTGCAACTTGTT
CTAAGCCCTGTGCATACAATTTGGGGTGTGTGGGTTAGTTTAATAATTATTTTGTAAATATAAAAGGAACCAAAGCAAC
CAAATTTCTGGATATAAATGTCCTGTGTTGATTATCATGATAATAGGTAGACATCTTGGATTGGAATTTTTTAACATTT
GAATGGAATACCCCATTTCCCCTTTAATCTTTGATAGGTTTAACATGGTCACTAACTGTAGAGTAGGGACTTGTCGTGC
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AGATTCACTGCTGGTGATGAGTGAAGTTGCAGATGTCAGGGACAGCTTGTGCTGTTCAGGTTAAATTATCTCACTTCAG
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TCAAAAACATCCAGAAAATCTTTTTGACCTTCGGGTGGTTGGCAGAACATGTGTTGTGAGGGCACCTCAGTTTAGAAGA
AAAGCCCTGAACTTAGTTCAAAAGAAGGGCTTTCCAGCATGCTATTCATTCAGCTTAGGACTGCCAGGCTTCCTGAAAG
ACAGGTGTGTCAGAAACAAAGTAAATAAACAGAAACTCACAATGTCCAGACCTTTCTCTCCAGAGCAGCACAGTTCCCT
TGCTGAGCGGCAACAGCCAAGGCTTTAAGCTGTTCCCTCTCCCTTTTCTGTTAATTGAGAAAACCAATTGCTGCAAGAG

Fig. 9.255

CAACATCAGCAGAGCTAAATGTAAATGGAGTTTAATAGAAAGAGACAAATAACCCACTGAGAACCCCTAACATTTCAGT
GTAATACCCCAGAGTTCCACACCATAAACTTGGTATTCCAGTATAAAGCTCATCTCTCAATTGCACGCCACCCTCCCCC
ATCTTATTCACTCTCTTGCATTATTAAAGGAGTGATCTCCCCCATGGGATCAAAATAGATAGATAGATAGATAGATAGA
TAGATAGATAGATAGATAGTCTCTAATATATGTATTAGAAACAGAGTCTGTGTTGCCCAGGCTGGAGTGCAGTGGCATG
ACCATAGGTCACTGTAACCTTGAACGTTTGGGCTCCAGCGATCTACAGGTGTGCAGGTCTACAGGTGTGCACCACCATG
TCCAGCTAATTTTTAAAATTTTTGTAGAGACAGGATATCTCTATGTTGCCCAGGCTGGTCTTGAACTCCTCTTCTCAAA
TGATTCTCCTGCCTTGGCCACCCAAAGGGCTGAGAATACAGGTGTGAGCTACCATGCCCAGCCATAAACATGAAATTTA
CTTATGTTTTATGTATACCATGTGCACATAGCCTGAAGGTAATTTTACACAATATTTTAAATAATTTTGTGCATGAAAC
AAAGTTTGTGTACACTGAACCATCAGCAAAGGAGTCACTATCTCATGTCAGTGACCAAAAAGTTTTAGACTTTGGAGCA
TTTTGGATTTCAGAGCATCTTGAATTTTAGGTTTTTGGATGGGGATGCTCAACCTGTATATATGCATACATGCATATTT
ATGTAACATACATAATGGTACCTAAAACTTAGCAAATACTCATATGTTAGCTATTATTTTTGTTGGTATTACTATGAAT
AATAACTATTAGCATTTTCTCTCATATCTAAAATGCAGTTGGTAAATGCTAAACTCATAGGAATGTTGTAAAGATTTAT
TTTTTTATTTTTTTTATTATTATACTTTAAGTTTTAGGGTACATGTGCACATTGTGCAGGTTAGTTACATACGTATACA
TGTGCCATGCTGGTGTGCTGCACCCACTAACTCGTCATCTAGCATTAAGTATATCTCCCAATGCTATCCCTCCCCCCTC
CCCCCACCCCACAGCAGTCCCCAGAGTGTGATGTTCCCCTTCCTGTGTCCATGTGATCTCATTGTTCAATTCCCACCTA
TGAGTGAGAATATGCGGTGTTTGGTTTTTTGTTCTTGCAATAGTTTACTGAGAATGATGATTTCCAATTTCATCCATGT
CCCTACAAAGGACATGAACTCATCATTTTTTATGGCCGCATAGTATTCCATGGTGCATATGTGCCACATTTTCTTAATC
CAGTCTATCGTTGTTGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATAATGCCGCAATAAACATACATGTGC
ATGTGTCTTTATAGCAGCATGATTTATAGTCCTTTGGGTATATACCCAGTAATGGGATGGCTGGGTCAAATGGTATTTC
TAGTTCTAGATCCCTGAGGAATCGCCACACTGACTTCCACAATGGTTGAACTAGTTTACAGTCCCACCAACAGTGTAAA
AGTGTTCCTATTTCTCCACATCCTCTCCAGCACCTGTTGTTTCCTGACTTTTGAATGATTGCCATTCTACCTGGTGTGA
GATGGTATCTCATTGTGGTTTTGATTTGCGTTTCTCTGATGGCCAGTGATGGTGAGCATTTTTTCATGTGTTTTTTGGC
TGCATAAATGTCTTCTTTTGAGAAGTGTCTGTTCATGTCCTTCGCCCACTTTTTGATGGGGTTATTTGTTTTTTTCTTG
TAAATTTGTTTGAGTTCATTGTAGATTCTGGATATTAGCCATTTGTCAGATGAGTAGGTTGCGAAAATTTTCTCCCATT
TTCTAGGTTGCCTGTTCACTCTGATGGTAGTTTCTTTTGCTGTGCAGAAGCTCTTTAGTTTAATTAGATCCCATTTATC
AATTTTGGCTTTTGTTGCCATTGCTTTTGGTGTTTTAGACGTGAAGTCCTTGCCCATGCCTGTGTCCTGAATGGTAATG
CCTAGGTTTTCTTCTAGGGTTTTTATGGTTTTAGGTCTAACATGTAAGTCTTTAATCCATCTTGAATTAATTTTTGTAT
AAGGTGTAAGGAAGGGATCCAGTTTCAGCTTTCTAAATATGGCTAGCCAGTTTTCCCAGAACCGTTTATTAAATAGGGA
ATCCTTTCCCCATTGCTTGTTTTTCTCAGGTTTGTCAAAGATCAGATAGTTGTAGATATGCGGCGTTATTTCTGAGGGC
TCTGTTCTGTTCCATTGATCTATATCTCTGTTTTGGTACCAGTACCATGCTGTTTTGGTTACTGTAGCCTTGTAGTATA
GTTTGAAGTCAGGTAGCGTGATGCCTCCAGCTTTGTTCTTTTGGCTTAGGTTTGACTTGGTGATGCAGGCTCTTTTTTG
GTTCCATATGAACTTTAAAGTAGTTTTTTCCAATTCTGTGAAGAAAGTCATGGGTAGCTTGATGGGGATGGCATTGAAT
CTTTAAATTACCTTGGGCAATATGGCCATTTTCACGATATTGATTCTTCCTACCCATGAGCATGGAATGTTCTTCCATT
TGTTTGTATCCTCTTTTATTTCATTGAGCAGTGGTTTGCAGTTCTCCTTGAAGAAGTCCTTCATGTCGCTTGTAAGTTG
GATTCCTAGGTGTTTTATTCTCTTTGAAGCAATTGTGAATGGGAGTTCACTCATGATTTGGCTCTCTGTTTGTCTGTTG
TTGGTGTATAAGAATGCTTGTGATTTTTGTACATTGATTTTGTATCCTGAGACTTTGCTGAAGTTGCTTATCAGCTTAA
GGAGATTTTGGGCTGAGACAATGGGGTTTTCTAGATATACAATCATGTAGTCTGCAAACAGGGACAATTTGACTTCCTC
TTTTCCTAATTGAATACCCTTTATTTCCTTCTCCTGCCTAATTGCCCTGGCCAGAACTTCCAACACTATGTTAAATAGG
AGTGGTGAGAGAGAGCATCCCTGTCTTGTGCCAGTTTTCAAAGGGAATGCTTCCAGTTTTTGCCCATTCAGTATGATAT
TGGCTGTGGGTTTGTCATAGATAGCTCTTATTATTTTGAAATATGTCCCATCAATACCTAATTTATTGAGAGTTTTTAG
CATGTAGGGTTGTTGAATTTTGTCAAAGGCCTTTTCTGCATCTATTGAGATAATCATGTGGTTTTTGTCTTTGGCTCTG
TTTATATGCTGGATTACATTTACTGATTTGTGTATATTGAACCAGCCTTGCATCCCAGGGATGAAGCCCACTTGATCAT
GGTGGATAAGCTTTTTGATGTGCTGCTGGATTTGGTTTGCCAGTATTTTATTGAGGATTTTTGCATCAATGTTCATCAA
GGATATTGGTCTAAAATTCTCTTTTTTGGTTGTGTCTCTGCCCGGCTTTGGTATTAGAATGATGCTGGCCTCATAAAAT
GAGTTAGGGAGGATTCCCTCTTTTTCTATTGATTGGAATAGTTTCAGAAGGAATGGTACCAGTTCCTCCTTGTACCTCT
GGTAGAATTTGGCTGTGAATCCATCTGGTCCTGGACTCTTTTTGTTGGTAAGCTATTGATTATTGCCACAATTTCAGAT
CCTGTTATTGGTCTATTCAGAGATTCAACTTCTTCCTGGTTTAGTCTTGGGAGGGTGTATGTGTCAAGGAATTTATCCA
TTTCTTCTAGATTTTCTAGTTTATTTGCATAGAGGTGTTTGTAGTATTCTCTGATGGTAGTTTGTATTTCTGTGGGATC
GTTGGTGATATCCCCTTTATCATTTTTTATTGCATCTATTTGATTCTTCTCTCTTTTTTTCTTTATTAGTCTTGCTAGC
GGTCTATCAATTTTGTTGATCCTTTCAAAAAACCAGCTCCTGGATTCATTAATTTTTTGAAGGGTTTTTTGTGTCTCTA
TTTCCTTCAGTTCTGCTCTGATTTTAGTTATTTCTTACCTTCTGCTAGCTTTTGAATGTGTTTGCTCTTGCTTTTCTAG
TTCTTTTACTTGTGATGTTAGGGTGTCAATTTTGGATCTTTCCTGCTTTCTCTTGTGGGCATTTAGTGCTATAAATTTC
CCTCTACACACTGCTTTGAATGCGTCCCAGAGATTCTGGTATGTTGTGTCTTTGTTCTCGTTGGTTTCAAAGAACATCT
TTATTTCTGCCTTCATTTCATTATGTACCCAGTAGTCATTCAGGAGCAGGTTGTTCGGTTTCCATGTAGTTGAGCGGTT
TTGAGTGAGATTCTTAATCCTGAGTTCTAATTTGATTGCACTGTGGTCTGAGAGATAGTTTGTTATAATTTCTGTTCTT
TTACATTTGCTGAGGAAAGCTTTACTTCCAAGTAAATGGTCAATTTTGGAATAGGTGTGGTGTGGTGCTGAAAAAAATG
TATATTCTGTTGATTTGGAGTGGAGAGTTCTGTAGATGTCTATTAGGTCTGCTTGGTGCAGAGCTGAGTTCAATTCCTG
GGTATCCTTGTTGACTTTCTGTCTCGTTGATCTGTCTAATGTTGACAGTGGGGTGTTAAAGTCTCCCATTATTAATGTG
TGGAAGTCTAAGTCTCTTTGTAGGTCACTCAGGACTTGCTTTATGAATCTGGGTGCTCCTGCAGGTGCATATATATTTA
GGATAGTTAGCTCTTCTTGTTGAATTGATCCCTTTACCATTATGTAATGGCCTTCTTTGTCTCTTTTGATCTTTGTTGG
TTTAAAGTCTGTTTTATCAGAGACCAGGATTGCAACCCCTGCCTTTTTTTGTTTTCCATTGCTTGGTAGATCTTCCTC

Fig. 9.256

CATCCTTTTATTTTGAGCCTATGTGTGTCTCTGCATGTGAGATGGGTTTCCTGAATACAGCACACTGATGGGTGTTGAC
TCTTTATCCAATTTGCCAGTCTGTGTCTTTTAATTGGAGCATTTAGTCCATTTACATTTAAAGTTAATAGTGTTATGTG
TGAATTTGATCCTGTCATTTTGATGTTAGCTGGTTATTTTGCTCGTTAGTTGATGCAGTTTCTTCCTAGTCTCGATGGT
CTTTACATTTTGGCATGATTTTGCAGCGGCTGGTACCGGTTGTTCCTTTCCATGTTTAGCGCTTCCTTCAGGAGCTCTT
TTAGGGCAGGCCTGGTGGTGACAAAATCTCTCAGCATTTGCTTGTCTGTAAAGGATTTTATTTCTCCTTCACTTATGAA
GCTTAGTTTGGCTGGATATGAAATTCTGGGTTGAGAATTCTTTTCTTTAAGAATGTTGAATATTGGCCCCCACTCTCTT
CTGGCTTGTAGGGTTTCTGCCGAGAGATCTGCTGTTAGTCTGATGGGCTTCCCTTTGAGGGTAACCCGACCTTTCTCTC
TGGCTGCCCTTAACATTTTTTCCTTCATTTCAACTTTGGTGAATCTGACAATTATGTGTCTTGGAGTTGCTCTTCTCGA
GGAGTATCTTTGTGGCGTTCTGTGTATTTCCTGAATCTGAACGTTGGCCTGCCTTGCTAGATTGGGGAAATTCTCCTGG
ATAATATCCTGCAGAGTGTTTTCCAACTTGGTTCCATTCTCCCCATCACTTTCAGGTACACCAGTCAGACGTAGACTTG
GTCTATTCACATAGTCCCATATTTCTTGGAGGCTTTGCTCGTTTCTTTTTATTCTTTTTTCTCTAAACTTTCCTTCTCA
CTTCATTTCATTCATTTCATCTTCCATTGCTGATACCCTTTCTTCCAGTTGATCGCATCAGCTCCTGAGGCTTCTGCAT
TCTTCAGGTAGTTCTTGAGCCTTGGTTTTCAGCTCCATCAGCTCCTTTAAGCACTTCTCTGTATTGGTTATTCTAGTTA
TACATTCTTCTAAATTTTTTTAAAGTTTTCAACTTCTTTGCCTTTGGTTTGAATGTCCTCCCGTAGCTCAGAGTAATT
TGATCGTCTGAAGCCTTCTTCTCTCAGCTCGTCAAAGTCATTCTCCATCCAGCTTTGTTCTGTTGCTGGTGAGGAGCTG
CGTTCCTTTAGAGGAGGAGAGGCGCTCTGATTTTTAGAGTTTCCAGTTTTTCTGTTCTGTTTTTTCCCCATCTTTGTGG
TTTTATCTACTTTTGGTCTTTGATGATGGTGATGTACAGATGGGTTTTTGGTGTGGATGTCCTTTCTGTTTGTTAGTTT
TCCTTCTAACAGACAGGACCCTCAGCTGCAGGTCTGTTGGAGTACCCTGCAGTGTGAGGTGTCAGCCTGCCCCTGCTGG
AGCCTCCCAGTTAGGCTGCTCGGGGGTCAGGGGTCAGAGACCCACTTGAGGAGGCAGTCTGCCAGTTCTCAGATCTCCA
GCTGCGTGCTGGGAGAACCACTGCTCTCTTGAAAGCTGTCAGACAGGGACATTTAAGTCTGCAGAGGTTACTGCTGTCT
TTTTGTTTGTCTGTGCCCTGCCCTGCCCCCAGAGTTGGAGCCTACAGAAGCACGCAGGCCTCCTTGAGCTGTGGTGGGC
TCCACCCAGTTGGAGCTTCCCGGCTGCTTTGTTTACCTAAGCAAGCCTGGACAATGGTGGGCGCCCCTCCCCCAGCCTC
GCCGCTGCCTTGCAGTTTGATCTCAGACTGCTGTGCTAGCAATCAGCGAGACTCCGTGGGGTAGGACCCTCCCAGCCAG
GTGCGGGATATAATCTCGTGGTGTGCTGTTTTTTAAGCCCGTCGGAAAAGCGCAGTATTCGGGTGGGAGTGACCCGATT
CTCCAGGTGCCATCCGTCACCCCTTTCTTTGATTAGGAAAGGGAACTCCCTGACCCCTTGCACTTCCCGAGTGAGGCAA
TGCCTCGCCCTGCTTCGGCTTGTGCACGGTGCGCGCACCCACTGACCTGCGCCTACTGTCTGGCACTCCCTAGTGAGAT
GAACCCAGTACCTCAGATGGAAATGCAGAAATCACCTGTCTTCTGCGTCGCTCAGGCTGGGAGCTGTAGACCGGAGCTG
TTCCTATTCGGCCATCTTGGCTCCTCCTGTTGTAAAGATTCATAAAGTTGATAGATTTTAAATCCTTGGAACTGTGCCT
TGTATATGGTGAAGAATAGAAAAGTGCCATCTTTCATTATTTTCACCAATAGTAATAAAGCACAATTGTATAGTAAACT
TGTAATATAGTATATGCTCAATAAATTGTTAATTAACTTTTGTGTTCATTTCCTAGTGCATATATATCACTAAGGGAAT
TGATACTAATGTCATTGCATGCATTAATGGTAACATTAATTATCTTCTTACACATTGGGCAAAAAAAGAAAATACCAGG
CTGTCAGAACATCTTGGCCCAGAAACCTCCCTTCAGCAAAAAGACAAAAATGTGAGTGAAGAGAATATGCCTTTGAGAA
TTGAGAGGGTTGCATTTTGCCTATTATGTATAGAGATTTGCCAATTTCCCTTTCACAAACTATGACAGTGACACTGATT
CTGGATGAGCAACCTGCATAATGCTTCAGGGGCACATCTCTTCTTCTAAGGCTGCAGGCTTGCCGATGAGACAGAACAC
AGCCTCAATTCCATCTGCTGTCATTTATCTGCCAATATAGATAGCAGATCTCTGTGGGTCTTGGACTGCTCAAACGACA
CAGTATATTTTAGCAACTGAAGGGGAACCACTTGAGATCACTAAAGGTGGAAAACACCTGATGACACCTTCAATCGAAA
GAAATGAGTATCCAAAATCTGAAACATTAGGCCCCACAGTACAATGGCTCTAGTGACAGATAAAAAATACTATTTCTAA
CCCTTATAGAATGAACTTGTTTTCAAGAGCTCAAAGAAAACTTTTATCACATTTATCTTCCACTTTTAATTAAAAAGAT
TATTTCTGAAATGCTAAAACTTTTGTTTTATTCATGTTTTAGAGGAAAGGAGAGGAAGAGAAACCACCTGTTACTTTCT
TGATGCTGTACCTGGCACCTGCCCTTGATTGAAGATGAGTTTTGCATGGTGTCTGAACCAAAAATAACAAGTCCTTTAA
AAATTATTGTCCTAAAAACCAGCAGATCAAACTACTTTCTTTTTTCTCAGAGGATTCACAAAGTATATTGTTTGGAAAG
GCAAAGTCAGTGAAGAAAAAAGAGGAACGTCCCTAAATATTGGTGTTGTCATTTATAATGTAAGACTTCACTAGAATGA
GATTATCTCAGGTGTGAATGGAGAAAGGTAGGATGCATGCAGTGTGGAAGCAGCCAGATTCAACACACTAAAATCATTA
ACACATATGTTTGTGTAGTTGTGTGTAATTTTGAGGGGGAGAAGAGGAATTTTGCCTTTAATTCTCACTCCAACCACTT
GACCAATAATTGGGAATCATCTCTTTTATCCCCTATTTTTGCCCCTTGTTCTATATGTTATTTTTTTGAGATGTTCTTT
ATCATAAAGTGCCTTTACGTAGGCAGTATATAAGCAGTATGCAAAATTGAGTCCCCATCTCTGGCATTGATCTCAAAGT
CCTTTTTTTGTTGTCAAATACCTTTGAATCTGTGTCTTCAAACTCTGCTTGGGTTCACTCAAATCAGTATATTTCTTTC
CATATGTAGGTCTTTTGATTTTTGTCCTAGGTTGACTCTTTCCTGAGTTCCCTTTTACATCAGAAATTAACATTTTCCT
AATTATCCAGTCTAGAAATTTTAGTCATCATTACTTTTTCTTTTCATTCATTTTTAATATCCAATCCATCCTCAGGTTC
AATTAATCCTTTCTTCAAACTCTACTTCCCCTGTCTTTCATTCTTCAGCTGAGTTCACATCACATAGGTCCTCATCCAT
TCATGCCAGGACTTCGACAGCAGATACTAACAGGCATCAACCTCCAGACTCGTTAAATTAATCCTACACACTATTTCCA
GGTGACTTACTGAAAGTCTTCATTTGATCCTGTCACTCTCCCTTTCAGGACTCTTCCAGCAGGTCACAACTCACATATC
TGCAGGAGCCAGGAGCTATTCAAATGGAGAAGGCAGGGGGATCCTGGGCAAGGAGGGTATAGATATATCCTCACCTGCA
TGCGCAGTGACTTCTGAGCTCCTCACAGTTGTTATCATGTGAAAATATAGGCCAGGGTTGGCAGGCTTTCTGATTTTTC
AAGAGAACACAGAAATTAGACTTTTAAAAAGTTGATTCAATAAATATGACAAGGTATATTAGGGTTCTCTGGAAGAACA
GAATTAATGGAATATATATATATATATATATATAGACACACACACATATATATAAAGGGTAGTTTATTAAGTATTAACTCA
CGTAATCACAACGTTCCACAATAGGCCATCTGTAGGCTGAGAAGCAAGGAGAGCCAGTCCAAGTTCCAAAACTGAAGAA
CTTGGAGTCCAATATTTCAGAGAAGGAAGCATCCAGCATGGGAGAAAGATGTAGGCTGGGAGGCTAGGCCAGTCTTTCT
TTTCACATGTTTCTGCCTGCTTATATTCTAGCAGCGCTGGCAGCTAATTAGATTGTGCCCACCCAGATTAAGAGTGGGT
CTGCACACTGACTCAAATGTTAATCTTCTTTGGCAACACCCTCACAGACACACCCAGGATCAATACTTTGTATCCTTCC
ATCCACTCAAGTTCACACTCAGGATTATCACAGAAGGCATACTATGTTCTGAGCTTTCTTCTCTGTACTGTAAAAAAA

Fig. 9.257

ATACAGCAGTGAATGAAACAGACAAAAATTCTACCCTTGTGGAGTTTATATTCCAGCTGGGAGTGAAAGATGAAAATAA
TTTATATATTATATATATATGTAATATATAGAAATATATATTTATTTATATATCTATATTTAAAAATATGTATGGGGAA
GATTTTGTGATAAATACCATGAAGAAAAGTGTATTAGAGAAGAGGTTAACGAATGTGTGTGTGGTGGGTGGTGGAATTT
TAAGTGGTGTTAGGAAAGACCTCATTCAGAAGGTAGCATGTGAGCAAACATGAAGGAGGTACAAAAAGTCCTCCTGCCA
TCATGGAGGGACAGTAAGAAGGTCCTGGTGGCTGGAGTGAAGTAGCAAAGTGGAGAATAAGGGAAAAAGTTGGAGATGA
AACAGAAGGGGACTCAGAGCTCTATTCATCTTACTAGTGGCTTTGCCTTATTAAACAAAGACCTTTAAACAGATGTTAA
CAAGATCCCTCTGACTCCTAATTTGGAGATGACTTTAGGGGAATAAGGGAAGAAAGAGAGATCAGTGAGAAGCAGAATT
CTTTTTTTCAGGGTCTTTCTCATTGTTGTTCTCACTACCATCATCCTTTGGACAGACAGGTACTCTTTTTAAGTCAATT
TGATCTAAATGTGGGTTTTAAAAAAATCCTTTTCTTTGTTTAACAGCTGAGACAAAGCAGGAATTTTAAAGCAACACTT
TACTGACAAACTATGTAGAATCAAAGTAACATGAAACTAGATAATTTGTTCTATCATAGGAGATATCTTATTCAAATGA
AGTCCCCTAGGAGAAACTCTTCTTCTGACTCCCTCTTCACACTGGACAGCAGAGGCCATCTTTAACTTTCCCACAAGAG
AGGGCTCCACAAGACATAGTCATTACTCAAGAGATTGAGAATCAAGACAGAGAAGTTTAGTCTCCTCCTATGCTTACTT
AAGGCTCACCTCCTTAACTCTGATTTCCTCTCTGGGAAATCTCTATTCCTCTGGTGACTGTATACTGGGATTTAGTACA
ACATTTAGGGAAGTGCAACCTACTCAAAATATCCAAATATAGCACCATAATTCTAACACTCTAATAAGAGGCACATCCA
CGTATTTTCAAGGGTGGGGAAAGATCATTAAATAACAGTATGAGTTATATTATGTTCTCAGTAAATATTAGTTACCTTT
TCTTCCTCTTGGAGTGACTTTTACCACCCTCTGTAACTCATCTAGCCTTATCTAATGGGAGGCCATTTTATTTTGGGAT
GGCATGACTACATAATTTCAAGCTATTTCTTATGTTATTTGCCGCCTCTTAAATATCTTCCCCTTACCTCCTTCTCATA
CAAACCTTAAAGTTCTTCATAAGTCACAACAACTTATAAGGTCTTTTACCTAACTGAACCGATGTCTTCTCTTTGCTGT
ACATTTACATGTCTATAACAATCATTTTTCATTTAAATATGAAACTCTTGGATATAAAAATATTAACTTGAAAAATAGT
AACCCTGATTTGCTCTTTATACTTTAACACCTTTTGTTTCTTTGTTTATAAATCCACTGTGCAAAGCTGTTTATGCAGC
AGAAATTTAGTAAACATTCTGTGAATGTCTGAAACATCCATTCATCAATCCACTCACACAAAAACATTAACATATACTT
TGTCATGCATTGTTAGATGTTCAAGCATGAAAATCAAACAGTAGTGAAGAATAATTTATTGTAAATATTATTTTTCAGG
GAAGAGAACACTTTAGAAATAACTTCTTGAGAAATTGGTTTGGAAAATAGTATATCCAAAATTAGAGAGCGCCATCTT
GTGGGCAAGTGAGTATCTCACACAAATAATAACTATTATAAGTTGCAAAAATAGAATTTCTTCTCTTTTTTTCTTACAA
TTCAAATCTCCTTTTTACTGTAAATATTTGTATTGATGCATAATAATTATACATATTTAGGAGGTACATGTGATATTTT
GATTCATGCATACAATGTGTGATGATCAAATCAGGGTATTTAAGATAACCATCACCTCAAACGATTATTATTTTTTGTG
TTGGGAACACTTCAGCTCTTCCAGATATTTTGAAATATACAATAAATTATTGTTAGCTATAGTCACCTTTCTGTGTTAT
CGAACACTAGAACTTATTTCTTCTATCTAACTATATGCTTGTACCCATTAACTAACCTCTTTTCATCCCACCTCTCTCT
TCCCAGCCTCTGGTAACCATCATTCTACTCTCTACCTCCAAGAGATCCACTGTTTTAGCTCCCACATATGAGTGACAAC
ATGCCATATCTGTCTTTCTGTGCCTGGCTCATTTCACTTATTGTAATGACCTCCAGTTCCATCAAGGACACTTAGGTTG
ATTCCATATCTTGGCTATTGTGAATAGTGCTGCAATAAACATGGGGGTGCAGGTGTACTTTTAATATACTGATTTCCTT
TCCTTTGAATAAATTCCTAGTGGTGGGATTGCTGGATCATATGATAGTTTTATTTTTAGTTTTTTGAGAAACTTCCATA
CTGTTTTCTATTATGGCTGTACTAATATACATTCCCATCGTCAGTGTATAGGAGTTCTCTTTTCCCAGCACCCTTCCCA
GCATCAAATAAAATCTTTTAAAGAGGCTCTGTCTGTCCTAGCTGAAGAACTGAAAATATATATTAAAATTTTATATAAT
TAATGATATTTTAAACAATCCTTAGAAACTAATTGTAATATTTACAATTTACTTTTAAATTTCTTGAATAGCTAAAAAT
GAAGGCTCAGCAAAGAAATTACTAAATATCATAAACATGACATACTTTTCATAAGAAAGCTTATAAAACTGTTAATGAA
AAAGGAGACAGAATTCTTAGAGATTATCTCTTTAAGGGGTCTATCACTTTTTGGGTATCTCAGGGTGCTTTGAAAATTT
GACTAGATCAAATCTCTCTTGAAAAATGTAAATGTACACACAATTTTTCATATAGTTTCAGGGGCTTCACCAACTCCCC
TGCGGTTGACTCATGAACCCATTCATGAACTTCATATTTTAAATACTTACATTTTACATAATATACAATTAAAGTCTAG
AAGGTTTGGGGGTAAAAGCTAAAATTTGATTCCATTATCTCTTCATCCCCAAAACCTCATGCTCACACAATTTTATAAG
ATTGATATAGATAGATCAAATCATGATGAAATATATTTGCTACATCGTTTGAGTTCCTAAGCTAAATCTTAAAACTTAT
AGTTTCTAGGCTATTAATGTTCCTTACATCAACAAAAATAAATATTTAATATTAGGTTCATGTCATTCATGGTATATCT
GTCACAAATACCCTTGATGTCCATTCTATCCAAAATAAAAGATGTTATTATGGATTTCCTTCTTTTTCAGGGCTGGGTA
GAATTCTAGTGTGTGAGTGTGTGTGTGTGTGTGTGTGTGTACCACATTTTCTTTATCCATTCATTGTTGATGAACACTTAG
GTTGATTCTGTATCTTTGCTATTGTAAATAATGCTATAATGAACATGGGAGTGCAAATATCTTTTTGACACACTGATTT
CACTTCCTTTGGATATATACCTAGTAGTGAAACTGCTGGATAATATGGTAGTACTATTTTTAGCTTTTAAAGAACCTCG
ATGCTGTTTTCCATAATGGCTATGTGAATATACATTCCCACCAACAGTGTAAACATCTTCCCTTTTCTCCACATCCTTG
CCATCTTTCATCTTTTTTGTACTAACAGGTATGAGTTGATATCTCATTGTGGTTTTAGTTTGCATTTCCTTGATTATTA
AGTGATGTTGAACATTTTTTTCATATACCTGTTGGCCATTGGTATGGCTTCTTTTGAGAAACATCTGTTTAGATCCTTT
TCTTGTTTTTTAATCAAGTTATTTGTTTTCATACTATTGACCTTTTTGAGTTCCTTATATATTTTGGAAATCCTGTCAT
TTGGGATCACATGGATGAATCTGGATGACGTTATGTTAAGTGAAATAAGTCAGGCACAGAATGACAACCACCACATGAT
CTCATTTAAATGTGAAAGCTAAAAATGTCAAACTCATAGAAACAGAATAAAATGGTTGTTAACCAGGGCTGATGGGTGG
GGGCTGAAGACTGGGGCAATGTTAGTCAAAGGACACAAAATTTCAGTTAAACAGGAGGAATAAGTTCCAGAGATCTATT
GTACCTCAGGGTGACTATAGTTAACAACAATACATTGCATACTTGAAAATAGCTAAAAGAGTAGATTTTTAGTGATCTT
GCCACAAAAAAAGATAAGTTTGTGAGGTAATGTATATATTAATTAGCTTGATTTAGCCACTTCACAATGTATACATCTA
TGTAAATAAAATGTTTTACATCATAAATATATACATTCTTATTTGTCAATTTTTAAATATATATATACCTTTTAGAATT
ACAGCTTAGCCTTGGGTTAATGAAGTCATGACAGTACGAGGTTTATAAAACTGAACAAAGAATCCTAACCATACGCCAC
CCTAACTATGGAAATACAATGGAACTATTAGTTTTCTGTTTCCTCTTTCTTTCTCATTGAGAAATCATGTCCCTTCATA
AAATCCATTTCTCTGTGTCAGATCATTGGAGCTCTTTTTTTCTCCATTATTATTTATAATAGTTAGTCTTATTCATCTC
TTGCTAGTATGAACCTTAGTAACCTAGGTTAGTATTTCCCAAAGTAGGTTTTGTGGAATGCTAATATCAACAGGTACTA
CCTGCAAAATGGTTGCATGGTCAAATAAGCTGAGCTTCATAAAATTAAACTGATATATTACTGGAAGCTAAATAAATAT

Fig. 9.258

TGTAAATATCCAGGAAGGAGATACATAGGCAAAATATTCCAAACTTTATTAAATAGTTAACTTTTTGTTTGCTTACAGA
GTAATGGGGTTGGGTGCTCCACAGAGAACATTATGGCACATGCTGAACTAGAGATAAAAAAGATAGATTTAAAAATATA
TGCAGATTGCTTGGACAAATTTCAGCAGGATAGTGAGAAATTGATTTCTAGTGTAGAATATTCTGGGAAATGAGATTTT
TTTACATTACGTGATCCTAATTCAAATATTATGATTAATTTTAAGTAAGCAGGCAATTTGATGTAATGGAGAAAGCACT
CACCTGAAACAGAGTTAACATGTTTTATTCCTTGGTACAGTCATGCTGGTTTTTAAGTGTTTAGCAATTCATTTTACCT
CTCCAGCTAAGGTAAAGGAATTCTTGTAGGAGTAATAGAAGCCCTGTGATTAGTATAAAACTTAGATTAAGATGCTTTG
TGCAGCAATTCCCATGGCATATTTCTTTTTGTCTTTTCTCTTTCTCTTTCTTTCCCTCCCTCCCTCCCTCCCTCCCTTC
CTCCTGCGCTGCCCTGCCCTTCTTTTCTTTTTCTTTCTTTCTTTCTTGACAAGGTCCTGCTTTGTGCCCCAGGCTGGAG
TACCTGGGCTCAAGCTATCCTCCCACCTCAGCCTCCCAGAAATCCTGGGATTGCAGACATGAGCCACCATGCCCAGGCC
CAAGTCATATTCTAAAACATGGCTTACTCTGATATTAACTGCCGTCTACAGGGGAATGGTCTAATTACTCTGCAAATGC
TCTCCACCTTCTAGAATAGTCACATTCCAATTAGTATATTTAAAGCTCTTAGAAGTCACGTAATAAAAAGAAATATTTT
CTTTAAGATTTTGAAGCCATATTTACAAATTATTTGACTCTCTAGTCTTTTTCTTGTTTTTATTATTCAACTGGACTCT
TAACATCTCAAAAACTAGTATTCAATGTAACAGTTTGGAAAATGTTCTTATACCTTTTCTACTTTTAATAGATAAAATT
GTTTTTAATTCATGCCAACAGAGATGAACCAACAATCTAAAAGAATGGACTCCTAATCAATTGTAGTGAATGGACCATA
TGTTCATATTATCTGTAATTAAATGGAGGAATTTAAAAGGAAAGGTGTGAGAATGGAAGAGAAGGCTGCCTCCCCACAT
CCTATCCAAGGCTCCTGTTTCTACCCGCACACCCTACCACAGAAATACCCAAGATTTATTTCTAGAGAAATGTTCTCA
GAAAGGGTCAGGACTCTGAGAGAGAAGATGTAGCACCCTGCAGGGATGAGGTGTGGGGCTGAAACAAGGAATGAAGGGA
ATGTCTGTGGTGCAGATCTGGTTCCCTGAGATACTCCGAGATAGATAGAGATTGGGATGCAGGGTGTTTGTGGGAAAT
GTTCTCAGTGTGAGCACCACAGGAAGAAGAGTAGGAACAGGGTTAAAGGCTCAATGGAGGCCTCTTCTGGTTCAGTTGG
GGTTTCTAAAACTTAGAGGAAGGGGTTAGGACTCTATACTATCTCCTTCCCGTTTATCAAATAGCCATTGTCTGCAGAC
TGCTCTGTATAAATGGGTATAATCTTGGGCAAGAGCAGTATACCCTCTACTGGAGAAACACATGCTGAGGGGATTCTGG
GCAGTGCATTTCAACATCCAGAAGAGTCAGCATCATGAATGCTGAAACCTTGCCTCCTACCCCACCCTCTACCTAAAAT
GAAAGTAATCAGATTAATGATAAATTACTTAAAAAAATAGATGCTGGAGTACAATAGAGTAATGGCTTCAATATTTTGA
AGGAATTTACATTTCAACATAGACTCCTTTAGCAAGTCAAACTATGAACTAGTGTAAAGACAGAATAAAGCCATCTTTA
GTGATGCAAGATCCAAAAAATGTAAAATATTAATACTATTCACTTCATTTGCCACTTGAGCTTCTATAAAATGTGACCC
ACAAAAAGCAGGAAGCTATCAAAAAGGAAATCATGAGATCCAATAATCAACACGGGAAATAACAGAAAGAATGCTTAGG
ATGTCAGATTTCTAGCGGGCCTAGAAAGCAACTAGCTGAGAAGTACAGATTGAAGCAAGAGTACAAGGTGTTGAGGAGG
AGGCTGAAAAGAGAAAATGAAATTGATAGATTATCCAATTTGCTAGAGCATCTGAGAGGGGTGGCAGATATGAGTACCA
TTTGGAAAAGAACCAAAGCAATTATTAACTACTAGCAAAACAGAAGTTGAGCCGTAAAGCAAATATGTATATATTACAT
ACATAGTAAATAAGATTTATATATAGTAAAAATATGTAAACAGTGATTGTTAATTTAACTAAAAATTGTGATGTAACTA
GGTGAAAAAAGGGAACTGGAGATCAGTATAAGATAATTAAATGTTTATTATGATAAGAAATGAATAGATAATGGCTAAA
AAAATGAAAATCAAGAAAAAAAAACCCAGTATAAGCATATTACTTAGAATTATAGAGTTAATTACCAGCAGAAACAAAA
TGACTTGAGAAAGAGCATTCACAATGAATATATATATAGTATAGTTTTGCAGACTGTTTTTTGAATAAGGTTTTCAGTATA
ATTTTAAAATTATATGTGCATAATTTCTCTATTTATCCTGATGGGTGAGTTAAATTGCCCTGACAACCTCTAAATCTTG
TAACAACAAAGATGATAGTGATTGTTGTTTCCCATACTACATATCATCGACAGGGAGCTCTGCTGCACAGCCTCCTCAC
TCTGGTACAGAAACTGACAGAGTTACCATCATGGACTTTGTTGATCCTTCTGGCAGAAGGAGAAAGGGGAAGAGATGGA
GAGTCTCACACCAGCGAATCAACGCTTGGCTGCTGATTGGCCAGAATTAGTCACGTGGCTCCATTCAACTACAAGAGGG
TTATTAAGTGCATCTACATGTGTCCTGAGGGTGGAGAGCTACAAAGAGAGAGCCAGTATCGCTAATGGTTGCCTCAATT
TCTCTCATAATAATTGTTAAGTAAAAATAAAATAGGGCTTGGCGCAGTGGCTCACGCCTATAATCCTAGCACTTTGGGA
GGCCCAGGTGGGAGGATTGCTCGAGTCCAGGAGTTCATGACCAGCCTGGGTAACTTGGCAAGACACCGTCTCCTCAAAA
AATAAAAAAAACTAAAAAAATAAAAAAATAGCCAGGTGTGGTGGCATGGGCCTGTAGTCTCAGCTACTTGGAAAGCTGA
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AGGCTGCAGTGAGGGGACATAAGTGAGATCGTGAATGGGGACATAATAGGGGGCATCATGTGAATATATGGGATGTAGA
GACCGTGCTAAAGACTGCCATACTCTCAGTTAATTGATTGAACTCTGAGTGAAACACTTGAATTTACACCGGGAAATAA
ATTGCCCAGCATCTAGAAGATGATTAATATTTCATGTAAACCAACTTGGTCACACTATGAAGATGGAAATGTAAAACTT
GTTACTTTTCTATCCATTATTAATTGCTTAAAGCTCTTCCATGCTTTAGATACCGCACTAAGCATTTATGTTTCAGCAA
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TTCAATGCTTAGAATAATTGAATTACATAAATATAATGTCCCCATTTTATAGGCGAAAATACTGAGGCTCAACAGACAT
AAAATGGCTTGAGTTACCAGGCTACAGTAGAACTAGGATTTCAGTCCAGGTCAGTCTGACCCCAAAACCTTTTCTTTTT
TCATTGTTTGGATTTAGCACCCCCAAAAATGTCTTGTAATGCAGATTTCCTGGGTCCAGGGAATTGTTTAAGTTTTTGT
TCTAAAAACTTTCTTATGAAGCAGATTACATATGGAAAATGACCCTATGGACTATGAGAATTGGCCTTTAGAGAATGTC
ACTGCCAGCCCTGTTGGTATCTATAAGAACCAATAAGCATTATTTACAGAGAGTGATATACACAGTGATAATTAAGAAA
TAACTATATTTATGATGACAATTTTGCCAAATTTACTAGAAAAAAATAAAATATCCTCTGATTTGAGATTTATTGTTCT

Fig. 9.259

TTTCTTTTGCAGGTAAGTTTGGAAATTTTTTTTGCTTGTGGAATAGAGGTATGGTATCACTTTTTTCTGAATTTTATTT
TAATTGCTTTTAACATTGAGCACCTTTCATAAGTAATATGTTTCACCACCCATTCGGTTGTTGTTGTTGTATATATTTG
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CAAAAGAGAGGATAAAATATTAGAGGGACTTAGAAAGACRTGATATTTGCACTGAGGAAAGAAGGTAGCCTGTAAGTTG
ACCACATAGGACCACGGCTTTATTATTGTGCACCGTGCTTTCATTAGTATATAAAAGAGGTGATTGTGTGAGATTTAAA
TCAAGCATGAACTTAAACTAAATTCCATATTAATTATAAACGGTATGTTTACTTTATTCAAAAAAAGATATATGTTTCT
CAAAATAATTGCAAATATTATTATTAATTATRTAAAAATAAAGAGGAATGAGGATACTAATCTACTCACCTAAGTTCTA
GCTAAGAGATGAGGTAGCAAAGGAGGAAGAAGTTCTTCAGTTCCTGGTCTTGATGGGTAAAGCGATTTGATCTCATTAT
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GTCTTTGTTTTAACTAGTATTCCGGGGGTTGATGGAAAGGGAGTGGAATTAAAGGGCATTGTAAAATGTCATGGCATCC
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CCTACCCTTTAACACATGGACACAAAGATGGTAACAGTAGACACTGAGGATTCCAAAAGCCAGGAGGGGAAAGGGGAAT
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CGTAAATATATGTATATACATATAAAAATAAAGAAAATGAGCCAGATTTACAAGTTGCCTCTCGGTATAGATGATTTTT
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TCAGCCCAGCTTTTCCTCGTGATTGTTTTGAGTAGCATGAATTATCCTCTAAAATGTTGGTTTTTATTCCTTTTTCATT
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TTTCCTGATCCTCTCCCTCCTCCCACCTTCTACCCTCTGGTAGGCCCTAGTGTGTGTTGTTCCCCTCTTTGTGTCCATG
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ATAATGGCCTCCAGCTGTATCCATGTTCCTGCAAAGGACATGATCTCATTCTTTTTTATGGCTGCAGAGTATTCCATGG
TGTGTATGCACCACATTTTTTTTTATCCAGTCTATCATTGATGGGYGTTTAGGTTAATTCTATGTCTTTGCTATTGTGA
ATAGTGCTGCAATGATCATACACATGCCTGTGTCATTATAATAGAATAATTTCTATTCCTTTGGGTATACACCCAGTAA
TGGGATTGCTGGGTCAAATGGTATTTCTTTTTTAGGTCTTTGAGGAATTGCCACACTGTCTTCTACAATTGTTGAACTA
ATTTACACTCCCACCAACAGTGTATAAGTTGACTTTTTAATACTAGCCATTCTGACTGGTGTGAGATGGTATTTCATTG
TGGTTTTGATTTGCATTTCTCTAATGATGAGTGATGTTGAAGACTTTTTCATATGATTGTTGGCTGCATGTATGTCTTT
TGAAAAGTGCCTGTTCATGTCCTTTGCCCACTTTTTAATGGGGTTGTTTTTTCTTGTAAATTTGTTTAAGTTCCTTATA

Fig. 9.260

GATGCTAGATATTAGACCTTTGTTGAATAGTTTGCAAAAATTTTCTCCCATTTTATAGGCTCACTCTGTTGACAGCTTC
CTTTCCTGTGCAAGAGCTCTTTAGTTTAATTAGATCTCATTTGTCAATTTTTGCCTTTGTTGCAATTGGTTTTGGTGTC
TTTGTCATGACATATTTTTTTTTTTTTTTGAGATGGGTGTCTCACTCTGTCACCCAGGCTGGAGTGCAGTGGCATGAT
CTCAGCTCACTGCAACCTCCTCCTCCTGGGTTCACGCCGTTCTCCTACCTCAGTCTCCTGAGTAGCTGGGACTACAGGC
GCCCGCCACCACGCCCAGCTGATTTTTTGTATTTTTAGTAGAGACAGGGTTTCACTGTGTTAGCCATGATGGTCTCGAT
CTCCTGACCTCGTGATCTGCCTGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGTGTGAGCCACCACACCTGGCCTGTC
AGGACATCTTCACCTGTTCCTGTGTCCAAGATGGTATTGCCTAGGTTGTCTTCTGGGRTTTTTATAGCTTTGGGTTTTA
CATTTAACTATTTAATACATCTTGAGTTAAGTTTTGTATATGGTATAAAGAAGGGGTCCAATCTTCTGCATATAGTTAG
CCAGCTATCTCAGCATCATTTATTGAATAGGGAATCTTTTCTCCAATGCTTGTTTTTGTTAGGTTTGTCACAGATCAGA
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GAGGATTGCCTTAGCTATTCGGGCTCTTTTTTGGTTCCATATGAATTTTAAAATAGTTTTTCTAGTTCTGTGAAGAAT
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GCATTCCTGATTTGGCTCTCAGCTTGACTATTGTTGGTGTGTAGGAATGCTAGTTATTTTTGCACATTAATTTCATATC
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GGCTATTTATTACTGACTCAATTTCAGTGCTTTTTATTAGTCCATTCAGGGATTCAGCTTCTTCCTGATTCAGTCTTGG
GAGAGTATGTATGTCCAGGAATTTATCCATTTCTTCTAGTTTTTCTAGTTTATGTGCATAAAGGTGTTCATAATACTCT
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TCAGGAGAAAAGGCATTCAATTTCCATGTAATTGCATGGTTTTGAGTGAATTTCTTAGCCTTAGCTTCTAATTTGATTG
CACTCTGGTCTGAGAGATTGTTCATTATTATTTCAGTTCTTTTGCATTTGCTGAGTAGTGTTTTACTTCTGATTATGTG
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TTTCAGTGATATGTTAAAGTCTCCTGCTATTATTGTGTGGGAGTCTAGGTCTCTTTGGAGGTCTCTAAGAACTTGCTTT
ATGAATCTGAGTGTTTCTCTCTGTTGGGTGTGTATATATTTAGGATAATTAGATCTTCTTGTTGAATTGAACCCTTTAC
CATGATGTAATGCCCTTCTTTGTCTTTTTTATCTTTGTTGGTTTAAAGTCTTTTTTGTCAGAAACTAGGATTGCAACCC
CTGCTTTTTTCTGTTTTTCATTTGCTTGGTAGATTTTCCTCCATCCCTTTATTTTGAGCCTATGTGTATCATTGCATGT
GAGATGGGTCTCTTGAAGACAGCATACCAGTGAGTCTCGATTCTTTATCCAGCTTGCCACTCTGTGTCTTTTAATTGAG
GCATTTAGTCCATTTACATTTAAGGTTAATATTGTTATGTGTGAATTTGATTCTGTCATCATGATGTTAGCTGGTTATT
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GTCTTTCCTTTCTATATTTAGTGTTTCTTTCAGGAGTTCTTGTAAGGCATGTCTGGTGGTAACAAATTCCCTCAGTATT
TGCTTGTCTGAACAGGATATTATTTCCCCTTCACTTATGATGCTTAGTTTGGCCAGATATGAAATTGTTGGTTGGAATT
TCTTTTTAAGAATTGTGAATATTGGCCCTCAATCTTTTCTGGCTTGTAGAGTTTCTGCTGAGAGGTCCACAGTTAGTCT
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TAATGATTGTGTGTCTTGGGGATGACCTTCTTGTGAAGTACCTTACCAGGAGTTTCTGCATTTCCTGAATTTAAATGTT
GGCCTCTCTAACTAGGTTAGGGAAGTTCTCATGGATAACACTCTGAAATATGTTTTCCAAGTTGGCTTCATTCTCCTCA
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TTGGTGACATTCTTGTCTATACTGGCTGTTTGTCTGTCAGTTCCTGCATTGTTTTATCATGATTTTTAGCTTCCTTCCR
TTGGGTTTCAACATACTCCTGTACTTCAATGATCTTCATTCCAATCCATATTTGAATTCTATTTCTGTCATTTCAGCC
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TTCAGGGTTCTTGTGCTGATTCTTTCTCATCTTTGTGGACTTTTCTACCTTTAATGTTTGAGGTTGCTGACATTTGAAT
GTTTTTTTTTCCTTTTATCCTATTTGATGACCTTGAGGGTTTGATTGTGGTATTAGGTGGATTCAGCTGATTGGCTTC
ATTTCTGGAAGATTTTAGGGGTCCAACACTCAGCTCCCAACTTCTGGACTGTGTGCACTAACTCTGGGGGACTTGTATG
AGGCCCAAACTTTGTCTTCTCAYTCTTCAAGTTTTGGAATCCACTCAGCTAGGGGTGCTGAGATGGACAGCTGCAGTG

Fig. 9.261

AAGTGCTAGTGGGTGTGGGGGTGCCTGCCTCCTTGCAGATGTTCACCAGAGTGGCAGAGGCAATGCAGCTTACAGAGGT
GGGCAGGAGGCCCTTGCTGGAGCCTGTGTGCACAGTCACACTGGAGGTGGTGTTGGCTGGGGGTAGGGTGGTGGCAGGC
ACAGGTCTGAATGCCTTCTCTGTGCCCCACAAGCAGGAGTGATAGCTCAGGGTAGGGGAGGATTCACTGTTCTCTGTAC
AGCCCACGTGTTTACTTTTCAAATAATTTGATGAACTGAGTGAAAATATTGAATTTAGACTAGCTGATTTCATTAAACT
ATGCTTAAAACTTCAATTTATACAATTTTTTTCTTCATTTTAAAACTTTGAACCAAATTGGCTTGTAACATAAACTAAT
AGATTCAATTAGTTATTTGGAATTATTTTCAAAGATGTGTCCAACATTCTAGAGTTTAAAGTTTATATCCTCAAATTAC
AATTGCYTGTAAAGTTTACTGGTTTATTTCCTCAAATGATCATTGCTGGTTTATGTATATGAAATATTCTCAAACATAT
CAAGGTACAGATAAAGCTATGAGACACGTAAGCTTCTTCTGTTGTCCATTGGGTAGGTAGAGAAATGGATGACTTGGCT
TATTTAAGCTAATTACTAAAGGAAATAGAGAAGCCTTGAGTCCTTTCTGGAACAAAACAGAATTAAATATTCATTACAT
GAGGGAAAGCATAATTTAGAACAAAATAATGAAATTTCCCTGGAGTCTGTCTTCTAAGAGGTTTGATGGATTCATTTAA
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TACTGGGAAAAAGGAGGATTCGAGTGGGGGAAAGTTCACGACATTGTCTCTCTGCCTCTAATCTTTCCTGCTCAAGTCC
TTGCAAGTAGAATCAAAATATCAATTGTTCTGAAATTAATTCTGCTTTTATTATTTCACTCCCTTGTTCAGARAAACTT
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CTTTCTTTCCTTTCTTTTCCTAACTATCATTGTTCATAATACAGTAATATACCCTCCCAGGAGTATTCAATCTTTTGGC
TTCCCTGGGCCACATTGGAAGAATTGTCTTGGGCCCCATATAAAATACACCAATATGATAGCTGATGAGCAAAAACAAA
ACAAAAAGTCTCATGATGTTTTAAGATAGTTTATGAATTTGTGTTGGGCCACATTCAAAGCCATCCTGGGCCATGTAGC
CCACAAGCCACGGGTTGGACAAGCTTACAGGTCTAAACTCTGATAATTTCACTACACCTTGGATATTCATACTTCTGGT
GAGCMGAGGCTGCTTACACTTTTTATAGGCCAATATCAATCATAACGTTTAAGTGTTTAATAAGTATCAATATTTATCT
CATATGGCTCTCAGAACAGTGAATTAATTCACTTAGCAAATATATATTGAACCATTACCACTATCTGGCCCTATTCTAG
TTGTTGGCCAAACAGCAGTGAATCAACATGTCTCTCCTCTGAAAGAATTTAATTTTTTGTGGGGAGGATAGTACAAAAT
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CAGACTTGTTACCGTCCTTGTCTGCCTCATGTCATCTCTTCCACATGAATACAATGATACTCATCAATGAATGCTCTGA
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GGTTTGGAAAACCTTGTAGCGGTTATGGAGGGGCACCCCAACCCATCCTTTGGTGTTGCCATTGCTTTTTAATTATGAT
TTGTGCTAAGCCACACATTCTCATTTTACCTAGCTCAGGGTTCTAAGCATGTTTTTCATGATGGTTTGGTTAGGAAAGT
GAGTAGCAATGAATGAGCTCCTCAATAAATACATAGCACAGACACTGACAGGCAAAGTGAAGTTTGTAATCACTTCCCA
ATCAATTGTTCAACTGAATGTGAGAAGAAATCATTTTCTCTCCTGTTTTGAGTCAGAATATCACATAAAGCACAACTCT
TCCTGCATACATTGTATCATATTCCACAGTAATTTACTTTTTTGCAAGAAGTATCCAAAATTTGGTTTTTCCTGCTGAG
CAGTTATCCAGATAATTGCAAATCAGTGGAATCATTTACATGAATAAAGATTTTTATTCTAATTAACGTGCTAAATCAA
GCACACCAAATGTCTCTAATTCTTATATTACTCAAATGGCAATATTTTTGTCAGTGACTATCATATGAAATTTCAGGTG
CCTAATGCATTTTCAAATGGCACTCATAAGCATACTAACGTTTTATAAATAAATGTCTCCATATTTTTAAGATGAATGG
ACAATTTTTGATTTTTAATRTAGTCCCCAATTTTCAATTTTTCAATTTTCATTTACCGAATGGAGAAACAGCATTCATC
AGAGCAAAAGAGCAAGTTTCACAAGTCATGGGAACAAACATAGATGCTAATTTCCTATTTTAGGAAGTTCTTTTTAAAG
TATTATCATTAAGAAGCACAACTCTGTGGAATATTTATGTGCACATTTAATAATAGAGAATTCGGATGTCAAGTCTGTG
TGTTACTCATACCCATACATGCATCCTCAAAAAGCCTTGGAAGTTAATCCTCAGCTGATGAAAGCTAAGCAATTGCTCT
GGAAGGATACTTGAAGTTTTTGGCTCTTGGGGTGAAGGTACAGTCACGAAAACCTCTCTTCACAAGAGGGCGCTGTGCA

Fig. 9.262

AACAGCTAGCTCCTCGTGAAGGAAAATTGCCTTGCAGACTGGCACGAAGTGGATTTCTTTACATCTATTAAGTGCTCTG
CTCTTCATAAAGGAAAATTTCCTTGCAAACTGGCACGAAGTGGATTTCTTTACATCTACTAAGAGCTCTGCTTCTTTCT
CTCTCTCTTGCTTTTTCCTTGCCATGCCTCTTCTTAGGCTCTGTAAGGCAGACTTCTTGTCTTCTCTAGTTATGCTTCT
GCAAACTGCATCATGCTGATTCTATTAATGATTTGATTTTAAATAATACCATCATAGGTGTTAAATGATGTGTATGCCT
ATCTGGCTTCTCAGGACTTCTCTCTCACTACTTTACATCTCACCAATGTGTAAAATATCTATGAGACATCTTTAATTTA
ATATGATTCAAAAGTCTTTACTCTTGACCTTTGTTTGAAGTCTAATCAACTAAAAACCTAAAATTCCTGGTGGGAAAAA
AAGAAACTTGACTACTCTAGTTTTTTAATAACATGTATTTCATTTATTCTGATTATAAAGTCATCTTTATTTATTGTA
GAAAATATAAACATTATGGAAAATAAAATTTAAAAACATCTATCATTCTATTACCCAGAAATAACTTGATCAACATTTT
GGTGCATATTTTAATGAATAGATTTTTAAATGAGAAATGCTTTTCAGGAGTAATTAGATTCTACTTAGTATTGACAATT
TTATAATATGCTTTTAAACAAAGTATTAACATTAACTTTTTTGGAAAATGCCACTTTCTGCTACTTATAGCTGTATTGG
CTATTTTCTCAGAACTTCTGCTGTAATGAGTTTATACTAGAGTTGCAAATACACGTTCTTTGAATGTACTTGAGGAGTC
GATAGTCTGAATCTGAGATTTTCCACAGCTCTTGGAGCACCTGAGAACACACTAGCTTCTTCCACGATTCTGCAGTACT
TGCTCCTTCCTGATAGGATGCCTTTGTAAGCGTACAACTCCAAACATGGGCTGAGTGTTCAGTAATCATTTGTGTTGAG
TTCTTCAGTTTCATGGAGACTAAAATTAGGTTTTCTCTGTCACTCTTGTAATGTCATCTGACCTTGACCTGCATTTCAA
ATTGCTGAGAAGTTAGCAAGCTGACTTTTACACTAGGCACATCAGAAATAATTGATTAAAAATAGAGTTATTGAAGTTG
AATTTTTTTCATTTATAGAAAAGTACAATGTCTTGTTCATGACAAACAAGGCCTAACATTTATATAATGTTCATTTAAA
ATATATCAAAAGAAAACAAAATAATAAAACCCACAGAAAACCCAAAAACAACTCACCTATTAAAACATCTCTTGATTTA
TAAATATTATAGTTTAGTTTGTACAATATCAGTAACTGTGGAAAGCTCCCAATTATCTCATTCCCAAGTGCTTGACTGA
CTCATAACTTACCAACAATTTTCTTATTTCAGAGAATCCCAAAAACATATTACCTAGGACTAACCTGGAATAAAACTTC
ATGGTTGATAGCTTTTATCAATTAAATGGGTATTGATTTKGATAACTCATAATCTTGAGCATATCTTTAGATTTACTTT
TTATCCTGAATTTATTTTTGTTAGTAAGATTTAGAAATTCAGATTTATTTTGTGCTTTATATGACATAGAAAAAAACAA
ATTGTCTTTCCTGTACAAAGTCCACCCTTCAAAATAGACTCCAGAAGAAAACATAGAGACTTATAACTTAGGTTAAACA
TAGGCACAATCCTAAATAGTATTCAGATGAGTCTTACCTGAATAATTGCTCACCTAATATGATAATCACCTGTTAAGAA
GCAGTTTCTTAAATGTCACTGTTGGAATCTAAACAGTAGATACACAGGTGTTCACTGTAAACTTGTTTCAATTTTTCTG
TATTTTTGAAAATGTTCATAATACCATCTTGGGGGGAAAAAGCCTCTTTTTGACATGGCAAGAACCATATTCTACTGAA
ACAGATCTTATATGCTCTATCAAGTTTATATTTTAGACATCCCTAATTCAGCTCATTCTGGACTATTCCAGGACTGATT
GCCCTACTAAGGCATGCTTATTTTTTTCTTTATGTGTATAAGAAGGATTCAAAGGGACCGTTTGTCAGTTTTAATGTGT
GAGCACTACTGATATGTTTTATTGAGAAAAAGCTTACTGCCACAGATCACAGAGATATTTTTCCGAGGTAAGATTCTTG
CTGGTTTGCAAGTTTTGTAAGGAGGCACCAGGACCCATCTCTGTACCCCCAGCCACGGAGCCCTTATTTAGACCCACAC
TGGGCTGAAATAGAAACTTCTGTACAAATGTATCTCTCCTGTGCTCTTTCCACTTTAACAGAATAGAAAGAATTGACTG
GTTGAGCCCAAATATTTCCCCCAGGCCAGWGTTACAAACTGGCGTTTCACCAAAAATAACTCATTTGATATGTTTTTAA
TGTTGATGATCTGAAAAATCATCTTCTTGTTTTTGTTTGTTTGTTTGTTTTTAGAGATAGGGTCTTACTCTGTCAGCCA
GGCTGGAGTGCTGGAGTTCAGTGGCACACTCACAACTCACTGCAGCCTCGATTCCCAGGTTCAGGTGATTCTCCCACCT
CGGCCTCCCAAGTAGCTAGGACCCCAGGCATGCACCACCATGCCTGGCTAACTTTTCTCTTTTTTGTAGAGATGGGATC
TAGCCATGTTTCCCAGGCTGGTCTCCAACTCCTGGGCTCAAGAGATCTGTCCGCCTTGGCCTCCCAAAGTGCTGGGATT
ACAGGCATGAGCTTCATACCTGGCTACCTTCTTCTTAATTATATACATTTTTTCTTAAATAAGAGCTCATGTTATTTTT
TATTTCTATAAATATTTTATATTCCTTCTCTTCTTATTGCCCTGATACTTTAAATAAACCTAAGCCCAGTCAAATTTTG
TATTACCCTTGAGTTTCAGTTTTTGGTTCATTCAGCCCTAAGTTCTCTTTGGGCATGAATTGTTTTCACCATTGACTAC
TAGCAGGCAGCTGGCATAGCCTGGGACATGTGAGGTGATGCTAAACATGCATTTGTGAGTAGAAGGAAGGAAGAAAGGA
GGGAAGGAAGGAAGGAAGGTAGGTAGGAAGGAAGGAAGGAAGGTAGGTGGGTGGGCAAGAGAGAGGGAGGAAGAAAAAA
AGGAAGGGAGGCTGGTTGGTTTGATTAGCTGTTGAACAAAATTCCATATAGAAAGTAGCTTACTAGTCTATATCTTTTA
GCTCTGTTTATTTCAAAGCTTTGTGTGTTTTTGTTAGGGTCACTTATAGAATATTTAGAAAAATACTTGCTGCCTCATG
CATTTCACCATCCAGTGCCTGGTGAGACCTAAAAGCCCATAGTTATAATTTTGTTTCTTTGACCAAAGTTTGTTTTATT
TTCAAATATAAATTCAATCCCTTAAGACTCACCTATAGCATATATATCAAACAAAAACACGTCAAATTTAACTCAGAAT
TTTGCTGGATAAATGATTTTACTGGATATCATCTGACCAATGAAATAACAATTGTGTGTTCTCAAATTTACTTCTACAT
TTTTAAGGTAGTAAGTTTAATTAAAAATCTCTAATATAAAAATGGCTTATTCTCTAAAATTTAGAGGTAAGCTAAAGTT
TTCATCAAGGCCCCATTATTTAGCACTTTCCAAACTTGGGAAGGTCACTTAACTCCACTGAACCAGTAGAAATAAAATT
AGTGGTAACACTGAAAGCAAAAACCAGAACCAGTCCAATTGTCTTATTAATAATAGCCTAATTGTGTAAATGTCTGTTA
TAAATTTCTTAGCTGGTTCTGAGAGATAGCTAGTAAATGGCACCCTAAGTTTTATATATTCTGTTACAAAACAAAAACA
AATAACAACAATAAGCTGTTTTCTTTTGCTGTTACTCAAACATCTGGATTTCTATTGTAGCCCCTAGCACATTGTTACC
TTTGGTTGGATGGACTGAAAAGTGTTGTGATTTTTCTCCTATGTAGAATATTCAGAGGGAAAGTGCAGGGCAGTGCACA
ATGCATACAAACATTGACAGGATCACTTTTCCTCAAGCTGAACTATACTCTAGGCCTCCTCTCTCTCTAGTTACCACAG
TTGAACCCACTCAGCCCCTACTTGCAGCCTCAGTCCCACCCCAGGCTCACAGGCCAATTTTGTCCTGGAATTAGGAATT
GAAAGATCTCAGGTAAGCCAGCCACAATGGAGACAAGATTTAGAGATAAGCAAAACTGACTTGGACTCACATGTCTGTC
ATATATTACCTCTGTGGTGTTAGCCAAGTTCCTTAACCTCTATGAGTCTCAGATTTCTCATCTATAAAGTGGTGATAAT
AATGTCTGCTCGTGAGTTGGAAGATTAAGTAACATGTAGATCTTATACCTGACACCAATTGTTTTTCCTGTGAAAGTTC
AAAACTTCTCTTATGATTTAATTCTTCAAGGAAGGTGACCTGACCTTTTTCATTCCTGTATTTACTTATATTCCAGGCA
TGTATTGGTTAAGATATACATTTTGCAATTAAGAGGGACCTCAATTTTAACCTCAGATCTGCTACTCATTGGCTGTATG
ATCATAGGGGCAAGTTACTTCAACTTCGTAAGTCTTCGTTTCCTCAGTGGTGATACAGAATAAAAATAACACAAAGCAC
ACAGATAAATTATTATGAGGATAATATATAGTATACCCTAAAATTCTGTGCAGAGTCTTCAGAACACTTTCATGTTAGT
TACCCTATTCAGTCCTCTCAAAAGCTCTTTGCAATGGCTCTCTCTCAAATGAGAACCAAATGGATAAGACATTATAACT

Fig. 9.263

CAGCAAGGTCAATAAACACCACAGAATAAACACCAAATAAGTGGTTGATATCATCATAGTAAAATGAGGAATTAGAAAA
GTTAACCCGACATTATGGTGATGTTTGGTTCACAAACTCATTCAGTGCACAGGAAGTGTCCAAGTAAGGAAGGGGTCTG
AGGATGACAGGTACTCAGGAATGGGAAAGTTTATGACTGTTGGCTCCAACAAATGGATAACCAGATTTAGCAAGATATT
GAACAGTCACGGAAAAAATCCACAGCACCAAAATTTAGCACATGAGATTTTTATTTAGGGATTCTTGGTATTGGGGGTC
TTTTTTCTTTCTCCCAAGGGAGTGATTTTGTTTCTCAGCCTAGCAATTTCATCACTGCTTTTGCTTATTTGTAAGCATA
ATTCTAAAAAGTTGTAAGAAGCCATTTCTGTCCTTATTTGGTACGTGGCCAACAATAAGGGTAGCATGAGTTGGAGTCA
GTGTTGCAACTGGTTTCCCAATTAAACAACCTGTCTCTAGGATCCCATAAGTTTTCAAAAAATAAGTAGAAACATTTCT
ATATTTAGGAGAAGCTTAGGGTTTTGAGCAATCGAGAAATTCTATCACCTAATTTTTGTAAAATTTCTTGCCACCTAAT
TTTTTTTAGATCTTGTAAACAAAGTTCTTAGAGGGTTTTAATGCTGCAAATAAAACATTAACATTTCTTCATATGATTA
ACCTTCAAGATATAACAGCTAATATTTTATTCTTACACACATGGGATATAAAGATTTCAAATAGAGAAAAGTGTTATCT
ATCAAAACTGAGGACTGATATTCTTTTTGAAACTGATAAARTGGTATGCCTATTTACCATGCTCATGAAGTAACCAATT
GGCAATTTTTAGAACTTAAAGATGTTTCTAACAGTATAAAAATAGTTTTCCTACCTCTCCCAAAAGCTTACAAACATCA
GTAGTGTGTGCCTAAAATTTTGTCCAGTTTTCAGAATGTTTTTATATAAATTGCCTTATTCAGCCCTCTCCAAAACTCT
TTGCAATGGCTCTCAAATGAGAACCAAATGGGTAAGACACTGAAACTCAGCAAGGTCAGGCAACAATCTTCAAGGTCAC
ATGGCAAGTTCATGGCATAACTGTGACTCTAATCTCTAATCCCCTATACAGTGCTGCCCTGAAAACTTGCCCAATGGTA
TTTTGATTAAAAAAATTAATTAATCAATCAAATAGGAAAAAGAAACTAAATAAGCCCTACCTAAATTACCTGTTCTGAA
ATTTCTGCCCCTATTTAGGCACATATAAGAATATAATGTAAATGCTCCATCTTATTTTTAAGATGCCCTGAAAATATTG
GTTTGTCCATTTATTAAACAAACATAATTGTGGTTTTTATGTCTCTAGACTGTTTGCTAAGCACTGAGTACCCAGAGGG
AAAGCAGATGTTATCCATGTTCTCATAGTGTTTAGGTCTATCAGGGGAGCCAGATACCAAATAAGTCATTACTAATGTG
ATGACATTGACAAAGAGGAAGTACAAAGTGCAGTGGAGACCTCACCTGGTATGGGGAGGCAGGGAAGACTTCCGGAGGA
AGTGAATTTCAAGATGTAATCCTATATCCACCACTCCTTCACTCACCAGTCAATAGCTAAGTAGGATTTTTATTTAAGA
CTGTATTCATGAGTAGAATATTAAATAGAAAGAATTTTTATGACTTTTAAAATCTTCATATACAGAGAATTGAACAAGA
CAATCAGTGACACCAGAAGACTTTTACACACTTGTTAGAAAATTGTGTCAAATTATTTATTTCAAATGATTAGTCTACA
TTGATTTCAAGATTTTTAAAGAATTTGAGTCTAGAAATATTTTTTGAATAGTTAGAAAAATCTCTTAGGAACTTGTCAG
TCATTTAGTAGATATTCAATAAACATAAAATTTATTTTCTTTTCCTTCCATTTCTTCCTCCATGATTTCTTTCCTTCAA
TCCCATTTATCCAAGTAGGCTTTATCCAACAAAGCTTTAGAAGGAGCTTTGTTAGTTTAGTGAATAGAAAAGCTTGACT
TAGTTGTTTTCCAAATTGCTAAAAAAAATCCTAAAATTAATGTAGATGGAAACCTTAAGTGTCTAGTAAAACATTTTGA
TTCACAATCATAGTCATATTGATTTTTTATCATTATATTTAAGCATGCCTCTTATTGATTGTTTTAGTCTATATCCTGA
TTTTAGCTCTTTAATTACAGTTTGTGTCTGTTTGTGTCCTGGGTCATATATGAGTAATGGATGCAATTGTAGAAGCTTA
AAACACAGAGCATGCTTTCCCAGTGTTCTTAAGACCATGGGGTACCTTCAATTCTGTTAATGTTTTACTGTTGCCAAGT
CTTAAAATAATTGTCTCCCATTTCAGAACATGGAATAATTGACCTTTCRATCAAGTAGACTCATATAAGGTTTAGAATG
AATATTTGAAAGCAATTCAAAGAAAATTTTGGTATTATTTTGCAACACTTCCATTTTGAGAAATAACTTATAGTTGATT
TTGATAAGTAATGTAATAAAAAATCATTTTTTACATTTACTTGTACTGAATGGATATTAGTTTTAAGGAGTACACAAGCC
CCGTTATCAAACTGCCTTTTGTCACACTCTTTTGCAATGYATCATTCTGAAGATAGAATTACAACGACACCCTCATCAG
AAGTAGATGGTAAATAACAGTCTGTTATTTGCTTCCRCATTAACTTCTGCTGGCTTTGAGTCTGTAACCAGAGACTATT
TCAAAATACAGCACTATCCTGAAACCCACTATCTGCCTGCTCTGGTTTCCTGAAGCAATGTCTTTCAACCTAACGCAAC
CCCACTGATGTAACTGCTTATTTCTCTGAAGTTCAGCTCAACCCTCGTCTCTTCCGTATGCCTGTTAACTAGAGACTTG
ATGCGCAAGTAATTGAATGCCTATGTGGATTACGTTTAACTTATCCCACTCTCAAATTTGGGAGTTTCATTTTTATTCA
TAGTAGCTATCTCCTATAAAGGAAATTCTGAGTTTCTGTGTCAGACACCGAAACCCAAATTTGCCATTTGTAACATCTG
GAATCTTGGAACCAAAATCCCAGAAATATTCAAGAGGCAAAAAMGATGCCTTATTTAGAGCTCTGCAGAACATAAGAGC
TAAGTTATTGGCAGGAGACGGGCACTTTGCTGATACTTTAGTGGGGTTAGGACTTACATGGATAACAATTGGATTGGAG
CAATGTTTAGATTTCCGAATCTGGTTTTCCCTAGGACATATAAAATTAGTGTGCACAACTTGTAAACATAATAATTTGT
CTCAGGGATGGAACATCTCTCCTTGCTATTGAATCATGCTTTTACTAAAATTCATCTGGAAAAATAAACGCTTAATAAA
TGACAGTAATTAGAATGTTCAAAAGATGTCTTCTTTGTTCTTTTATACTCTTTGATACCCATGAAGTAAAAATTATAAA
CAGCTTGTTGTATTATAAATGCTAGTAAAGATTCATCCTAGAAAATCATTTTATTTAATTTCTTATTTTTTCCAAATGT
CTAAATTCTCATGTCTGTGAAATATTAGCCAGTTCTTCAAAAACAATATTGATATTTCTATTTGAAATCAAGGCTTAAT
TTTGCTCATGATTAATCTCAGAAATAAGTAGCTTATTTCTATGACCTTACTGAGACCTGGTAACCTAAGAAGGATTATG
TGTAACTGTGTGGAAGAAATGAAAAGGAGGCGGTAAGTAATTATTTAAGAAAAAATAATATTAATATTGACAGACACTT
CTTGTGTCTGTAACTGATTTCACACTAGGAAAATGAAGCAGAGTTTCAATTTTCTTGTTCATAATTTCACATTTACAGT
TCCATTGTTTTATCTTGCTTAACTGTTCTAGATGACTGCCTTTACAAAGCAGGGGGAAAAGAAGGAAGAAATGTTTTTG
ACAGTAATGAAAAAGACAAGATTAGTTCTCCTTCCTTGCACATTTTTAGAAAAAGTTGGACATTCCCTAGCAGATTCAT
TCTAGATTATTCGTATGTCCTTGTAGCTTATCAATTAGATATCCATTAAATTTGAATATCCCTTTAAAAAGGTAAATTT
GTAAGCAAAGGCAGTTAATTATTTGTGAAAATGTATACTGCTGGCTTTAGCCTGAATACAAAGATAGGGTTTATCTTGC
TATCAGTAAAATTGGGATAACAATGAAAATATTTTTCTGCTTCCAAAGTCGTATACATAAACTGTAGCTTTTATTAGAA
ATCAGTGATGCTGTTTCACCTACAAAAATTTAAACACCACTGGACAAAATGAGAGCTTTGTGTTGCCTGGAGGGTGAAA
AAAGTCCATCTTTGCCAGCAACATCCCTTCTACTCTTCTGCTTGTCTTTGTGGCCTCCCTCCCCCTCCCTTTCACACCA
AGCCACCTCACCCCACCAGCTGTTAGGGACTCCTCCCCTCTTTACGCAGATCACCAGTTATCTTACACTGTCTGGCTTT
AGTCTCAGATGAAGACATTCTAATAAGCACCAAGTTGTTCAGCTCAGTGCTAACTCTGCCAGGAATGTGTGCATTTCCT
AAGAGCTGCCGAAAATGGAAATTAAATAGTTTGAAAGAATTAAATGATAATGGTGGCATTTCATACACCAGAAGGGCAG
ATTGGCATCAGTGTAAGCACCTTTTCAGTCCTTCTTTGAGAACACCAGGAAAGTGGCTACCTGTTTTGCTCATGCGAAA
TTTGGATCTCTATACAAAAGCAAAAAGACAGTTTGTGAAGCGTTACAATATTGCAAGTTGATTCAGRGAGAATGTGTTG

Fig. 9.264

TGTTTATTTTTGAACTCTCTGCTCCTCCAAGGTTGCTGCTGTTCAGGGCAGTTCTCACTCACCCACTTTCTTTGAGCTC
ATGTCTGATAAGAAAGAGGTGAAACTGTAAAAACCTTTTCTATTACTCGTCTCCAAAGCTGATATGAAACCTGTAGCAT
TCTTAAGAACCCCTGGTGTCCTGGATGCTGTTGTGAAAACAAGCATAATGTTTAATGTCTTGAGCTTTTATTGAAATTA
TATGAATATTCAAGACTCCCTTGGTGTACAAGAGACAGATTGAGCTTTAGAGGTCTCAAAATTTGCAGATATGGTGATG
TTCACTGAGCTCAACTCTTGGTCAATTTTGTCCAGTTCAGAGAGGGTTAAATTCACTCTTGGGCACTTGAAGCCTCTCT
AATCTTATCCTGAAGAAGTGGCGCTCTCCCTTGGTTTACAGTTGAGGTCACCCGCGGGGCAGTGTTTGGATACAGACTG
ATGAAATTATGCTGCATTGTTAACATTGAATACCACTCAGTGGTGAGGACCGATGACGGCACTAGGGTCCTTTGACTCC
TTGGGTACAATTTCTTGAAATAGATGCTTTCCCAAAATGTCCTGGACTCATAAAATATATGAAGGATTCTATTTGGCTT
TCATCATTTATTTAATTTGAAAGAAAGTTGTTTTAACAGATTTATCAGAGTTAAGAAATGTTTCTAGGGAATAGAAAAT
GGACAAGATAATTGATCTTTGTTGTCAGAGTCATGCATTGTAATTCACTCTCTAAGGTGACGCAGCATCTCCTTGAGGG
CAAAGCTGCCAAAAGTTCTGAAAGTGATCTGCCTGTTTTTTTTTCTCACACTGACTTTTAGAGAGGCGCTGGTATTTTC
AAGACGAGTAAATCCTGTTTACATCCTGTGGAAGGTTGGCTAAGAATTATATCCATCTCTTTTTAAGAGAAGTTGAAAT
AAGGAAAATTATAGTTGGCAGTTAGCTGTGTGAAATTTAGTAATCTTTGTCAGATGASCCAGTCATAGGCATGTATTTT
TTAAAATTTTTTAACGAAGCCCTGTGGGTTTACATTTTTTAAAGTTCACACTGATATAAAGGTTTACCCACTTCAATCA
CACCTTTTGTTGTGTGTGCATGCGTGTGTGTGTGTTGTGCTTTTCAGGAGTGGCATGTGACTATGCTGTTTAATCAGGG
CTATATTTAAAAACAAATTTTCGAGGGAGTGTTTCTCACGTTAATTATGAGATAAGGCCTGAGTGAAGCAAACTCTGTC
GCAAAGGCCAAGTGTCATGCAGCAGGAAGTCCTGGCCATCCCTTCCAGCCCTGCCTCAGCCAGCCTGCCATCTCTCTGT
CAGCGCATACCACTGCACAAAGGAAATGCCCTCACTCAGCTACAAGTGCCTCCTGCTCCGTGCGGGGCCTCAGGGCCCC
AGAGCCCCGCACCAGCTCTGACTTCTCGTGGTTCCTGGGGATCTTGGCATCGTCCTTAAAAATGGCTTTTGTTTGGGAT
CCTCTGGGAGCCACGGTGCCAGGACCATCTACAAGAGCCAAATCAAGATTGCGTTTCTCAAAGTCCTACAGGTATTACT
CTTTTCCTTTTGTAGCTAGGAAGAATTGTTTAACTGCCTTAGGCCCCTTGCAAATAAGCCTTTGCCCTATGTTGACCTT
CTAACTCCTAATGCTTGTTAAATTGACAATATATTAAATAAGAGCCAAGAAGATGATGTAAACCTTGAAATAGGGGTAT
GTAGGTACGTGCAGAAGTTGAAGGAAGTTGACTAACTTTAAAAGCTAATTCTGAGAGTTAAATGGCAAACTTAACAAAG
CATTCATATTACTGCCACCTGAAAAACAGTGTATTAACTTGTCTAATGGCTTAATACAGTCAACTCTAAATGTTAGGGA
AGGGTTCTTGTTTGACCAACAAAAAAAACACTACATTATTCTTCATAAGTGTTTCAGGGCACATGCACATGAAAAAATG
GAAACTAATGCTGTTTCAGGTAGTAATTCAGTGTTCATCTTGCCCAGCMGAATTACATGTCATGAATTCAAACTAAATA
TTTTAATAATCTTTTGTTTCTGGAAGTCATATTAAAAATCTTGACCTCATGACTTCACTAAACTGTCAATGACTGTTTT
ACAACAAAATCAGCTTATTTTAACCAAATAACTGGAAAGAAAGAAAACACTTAAAAAATATTGGATTTCCTTCTTCATT
TGAGTATTCTAGGTGTTAATAAAGAGAAGATTGATTATTCTTTATTATTGTTTAGAAAGAAAACCTTTTCTGTTTTTGA
TTGATTACAATCTATAGCACTGAAAGGTATCTATTTAATCAATAGTAAATAGAAGTGACATTGTTTGCAAAATTTTGGA
TATAAGGTCTTTCTTATTTAGACCAAATGCAGCACATCTGGAAGCTGCCAAGCCTATGTAGAAATATATATTAACACTG
AATTAAAATGTGTTCTGATTTGCCTGCATATAAAACATTCAAAGTTTGAATTAAAATAATTTATAAGGATTAATTATTT
GCTTTAGACACTAAAGAAGATAATGTCCTTGGAATTTTTAGGGAACTATAAAATCAGAGAAATCAAATTTAAAAATTTT
GTATAACAATGCATAAGCAAACTTTGGCAAGAGGTAAATATAATTTGCCAGCTAAAGGTATAGGTATTAACTCCATTTA
TTTTTATTTCAAAATAAAATAATGATTTATTTGTTATGTTTGTTACAGCTATAAAATTTAGTTGAAAATTTTAAATTAT
ATGCTTCCTATGTGCTTTGCATTTTGTTAAATGTGATTCTCATGCTTATTGTATGCTAAATTGTACATTTAGAACTTAA
CATCAATGATTTGCTAACATTACTGTGCATATTTCCAACATATGGTGGCTTCTAGGCTCTCTTCATCACTAGATCTGAT
AACAAGCTCCTTAATATCATAAATCTCCAGCTGCTGAATAAAGTAAAAGCAATAGCTTGATTGACTAATGAATTTGAGA
AATCTCACGAAATGCAGAGTTTAAGCTCTTCTGTGTAGTTTGCAAATATATTATAAACCTTGCCTTCTCAATTTGGCAA
AGATATTTTTATTTTGAGGTGTTATGGTATTGTAACAATTTAAAGCTATATGATAAATATATTTTTTCAAGGTTCCTTT
GGTCAAGTTCTGACCCTTTCCAAAATATAAGCATTAGCAGCTAAGAATGACTTTTTCATGTAYTTGAATACCTCACATC
TGTAATTTTAACAAGTTTCATTTGTAACAAGTTTAAGAGGTGAGAATGACATCTCAAATATCCATCATGAGTCAGTTTC
CTTCGGAAGCTTGAGAGGCTCAGTCCTTCCTTTACTTCCTCTTAATTTGAATATACARTTTCCCACAGAATAATTAATT
TTTTTATATGTGCTGCTTTCACTGTTTGGAGGTTCTAGTTTATCTTTCCAGTTGCACTGCAAACTCTTTGAGGTTAGAA
GTTTCCTTACATACAGCAAAAATGCCAGTAATGCCTATTTGATAAAGTATTCTGTTACCCTTTCTTATTTGGCATCACC
CGATAATGTTTTATTGGCATAGCCAACTTGATATGATCATATCTATCATAAGTTGAATTGAGTGGAAGGGTTAGGGAGG
TAGGAAGGCAGTTGGCCACTGGCTCTTGCATTTCTGCAGGTCCCTCATGTATCCAAAGGAGATTACGCATTCAGCCACG
ACAATGTACTGACAATAATGAAAAAAGGTACATATCATATAACTTAAAATTTTTATCATACCATAATACCTCAAATGCA
CCATGAGTCACTCTATATATATACAGACACATATACACACCACACACAGGCACATGCACGCACAGTTAAATGCTATAAT
TATCTTCTGAAGAGCATAGTTTTATTGCATAGCATTCTTGGAATTAAAGGTGTTAAACTATTTGATGTAAACATGTAAA
ATATCTCATAATGTCACAGCCTTGTTTTTGCATTTCTTATTTTTTAAAAAATATACAAAATCCTTACGCGGTGAAAGTA
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AACATTTCTTCATTGAATTTCTCCCTTATAATTTTTTTTATGAGCAATATTTTTTATCTTGTAAAATCTTCAAATGTGC
CTATTGTAGTGTCATTTTTCTTTGGCTATTGAATGGATAATAATGCATGCTACTGGGGGTACACTTAGCTTTAACTGGA
ATATTTTTCCTTGGCATGGCTTTTGCTGCCTGGTAATATTCAGGCTAAAGGAAAGCCAGGTGTACAAGATATGAAATTC
AATTAGTGTCTGATTTGTTAAAGTAATAGCAAATCATATACATTTAATGAGTGTTGACTCTTGAGAAATACAATCTGAA
ACAGTTTTACAATGCTCAAAATAGATGTGAAAGTTTTTCAGCTGTGACAATTTTTTATCTTATGTGGGTAAAATACATT
TTTATAAGAAAAGATTAATATATAGCTTATTAAGTTTGATTGAGGCAGAAAGAAGGATTGAAAGAGAAAAGAAGAGGGA
GAGGGAAGGAAAGGCAGGGGAGAGGAGGGGAGCAGGGCCGTGGAAGGAGGAGTGAGGAAGAGAAAAAGAGAGAAAGCAG
AGGGTTACATAATAAGGAAGGTACTTTTTCTCTGTGAGCCCAGAAGAGATTGCCAACCATGTTTTCAGTAATGGGATCA
GTGTTAGCATTAGGGCACCACTTACAAAGATGAGTACTAATTTTGAGGGCAAGGTGCTGATTTATCTGCCTAGGTTCTG

Fig. 9.265

GCACACATGTTTAAAGATTCACCTAATTACTTTAGAGCAACGCCCCTCCCAAGTATTATAGAGAAGAAAGAGGAGAATG
ATGTGCTCAAGAAAACAATGTGGAGAAGTTTATATTGGTTGTTTAAACATAGTACCTAAAAAAAAAAAAATGGGGAAAA
ACGATCTGGGAAGTAAAGAAAGAATCAAGGAGCAAAGATTTAGCAAGCCTGTGGACCCTGACAACTCCAATAAGAGAAC
ACTAGGGAATTTTGTGATTTAAAATATATTATTGCTTAAAACTACAGTAGTGTTCAAGGAAACTTTAAATAGAAAATTA
CTCTTCTTGAGATGATTCTGTCTTCCAAAGAGAACAAATCACAAGGATGTTAAAAGGAACATTTTATGTGACAAGTTTG
GGGTAGGTACTATGTAAATAGAAGAGAAAGTCACTCAAGGTACATTTGAATGTAGGGCAGAGATTATTCCATAGCATTC
CACAGGCCAGAAACAGAAAGTGTCTTCTAGTTTTCTTGCCCTTTATAGTAATAGGGGTCATGGGATAGAAATTCTCAGA
AAATCTCCAAATCTCATTTTTGCCAATTGTTTCAACATCTTTTCCTTCCCAGCATTTTAGCAGAGCTGCCAAACAGGTG
ATTAATTAAATACATATGTGCATGCTTGTACCTCGTGTAGAAGGTCTAATGAGTAAATTTATTTGATATGACATAGACT
GAACAGTAGAAGGAAGGATTAATGACAGTCAGATCAACAAACAAAAGTACAAATGGTATCTGGGCTATGAAAAGATAAA
GCAATATTTGCCCAAACAAGAAGATCTAGATATCCCTAAATTACCTCCTATATTATTAGGAAGTAAAGACCAAATCTAC
AACTTTGATCTGGAAATTGTATAGTAGCTGATATGAACAGGGATCATAGGAGAGTGTGGTCTCATAGCTACTCTTTGCT
ACTACCAAAACCTGAGTGGTAGCACATCAGTGATTGCCCAACCAAACTGCACAATTCCCATTAGAAAAAGCTGTCTCAA
ACCCACATCTTAGAAAGGAAGTGAATGCCACCAGTGAATCAATACACTGGGATGTAACTTTCTGCATACCCCAAGAATA
CCTCCTGTTGCATAGCACTTTTTAGTTTTCAAAGCTTTTCAGATGTAACAGATGTGACAGCTGTTGTTTTTAGTGTGCC
ACAGCTCATCTCACTTAATTCTTTAGGGTAAGTGAAAAAGATGAGTGTAATTAGTATCAAATAAGAGAAGAAGAATTGA
AGGTTCAGGGACTAGAGACCACACATATATGTGGTTAGAAAGTCCAAAGTAAGAACAGTAGAGCTAGTTTGTATTGGAC
ACTTACTATGCACCAGGAACCATTCCCAATCCCATACATGCATTAGCTCATGCATGTCATCCTCCAAAACAGCCTCGGG
AGGTGGATCTAGCATTACCTTTATCTTACAAATGAGGAAACCAGGCAGAGCAAGTTTAAGAAACCTGCACAGGTGTGAA
TTCTGGAAGTCTGTGTTAGAACCAGGACTCCTGGTCCCTCTCCCACCTCCAGCTTCCTCACCAGATCCTATTATCAGCA
CACAAGGAAAAAAATTCCATAATGAGAGGTATTGTTCTAACAGATGTACTATCTTCCTCTACTTAACTCTGAATTTTTC
TCTGAAGACAGAACACCACGTAATTTGTTATAGAATAGGGCTTAGTAATCAGTTAAAATATAAACTTGTTAAATAATAT
CTAAACTGTCCTCTAACCTAATTGATGTTGGTTTAAAGAAATGCTAAGCAAAAGCATCAAAATAGAGGTATTTTTATAT
TAAAAAGAAGAAAAAGGAAAATGAATCCGTTATTTTATATTGTCTGCTTCTGCCCCCTCCTGGCTTTTGCTTCATGGGC
TTCCATCTGGCTCATTTCATCTGGCCAAAAACATTGGTCATGTGGTTGTATTTTACTGCCAAATATTACTCCTTGGCCA
GCTGTTCAGAGGAGCCAGAAGATTCTCTGAGCTMGAGAGGTCAACTCCATCCTGTGTCATGTCTATTTATTCTACTGGC
ATAGTCTTGACTATTAAACTAGGTTTCTTAATGATATTTCAAATTGTGAGTAATGTTGGCTAAATTGACAAAAAGAAAT
TATAGACAACATTTATATCTAAGAATAACAATACTACTAACAACCATTGCACATTGTAGGAAGAGGTAGCATGGTATAG
GAGGAGAACTTTGGCTCTAGAGCCAAACAGACCCAGCTTCAGTGCCAACTCTGCTGCTTTCTTGATTGGGCAGGTTTCC
TAACCTCTCTGAGCCATTTCCATGTACATAAATAGAAAATTAAAATATCTACTTCATAAGGTCGTTGTGCAGATTAGAT
GAAAGCATGTACGTGAATGCAGGACTACCTGCCAACTCTTTCATAGCATTTTCCAAGTCTTCACTAACATTTCACAAAT
TTTGTGAAGCTTCTTTTGTGAAATACATTTTCAGATAAACTATCATCATTGGTACCACTCTTGGTCACAGAATAGTACA
ATAGAGCTGGCTTATAAATGGTTACCTTATAAGCAACTTGCACATACAACCCAGGCTCACCTTGGAAATGTAGTGTGCA
GGAATGATTGACAGCTGGCTAGCTCTACAGCCACACTGCTGCTGAGGTTCACATTTTCACATTATCACTTATAGCTATG
AGACTTTGGGCAAGTTACTTCATGTGCCTCAGTTTCCTCATTTGTAAAATGGAGTATTATGAGGATTAAGTGTGTTAGC
CATGTAAAGTGCCTGGCACATAGACAACACTAAAATAAATGTCAGCTATTATTAATAATAGAATGTAAGCTCCACATGG
CAGCAATTTTTGTCCTTTTTTCCACCTTTGTATGGCCAGTGCCTGGAAGAGTGTGTGGTACATATTAGGTGCTTGGCGT
TTGTGTATTGAATGAATGAACCTATTAGCAAATGTGTTCCGATTCATGGCAAGTGTGAGGATACTCTGCTTCCTTTTGC
CACATTCATGGGAAGAGGGGGTTAGAGCTGAAGGAACCTGATGGTTCATTTGTTCAAACTCATTTGTCTTACATTGAAG
AGCTTGAAGACCTTGAAAGGCCCCAGGGTCATGCAACTTGATAGCGGCCTGGTCAGAGCTAGAACCCTGGCTCTGTGTG
CTTCTGTGAAAATCTTTGTTCCAATGTCCCACCCCTCACTTCAATACATATGCCATCTAATTCARTGCTTTCAGTAAGG
CAGCAAAATGAATGAATGATTCAGAGCACACTTCTTGCAGACAGGAGAGTGTATAAGAGCCATAATTGGGCAATGACCA
TGGAAGGACAGGTTTCTGAATAAGAGAAAGACTTATCCAAGTAAAATTATGTTCAGACATTTTACTTACAAGTCTAAAA
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TATGCATTTTTTTCAAAATTGAAGGAAAGCCCCATCTCAAACATTCAAAAGAATCYGCTCAATTATCAATGTAGACTAG
AAACAGAGATAGAGAGGGGAGATACAGTTTGAGTGTTTTCTGTATTATCATGACAGCACATGGAACAACCACAGGCAGA
AAGATTACAAACTCTGCAATAAATATAAAGGTATTGGTTTTATAAGGTGGCCTGCAGGCTACGGACCAGCACAGAGCTC
TGGCAAATGTGGAATGCCAGGAGATGTACAAAAAAATCAAGGTGACAAAAGAAGAAAAGACACTCCAAACTGCCAAGGG
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TTGACTGAGCAGCTGGATCAAAGCCTGTCTGATCTGGGCAGAGCAAATAAGGAATACTTCTTACAAAAGAGGAAGCATT
CAATTCTATACACTTTACCTTGGTACTCCTTGTTCTGGAGGCCTCAGCTTCTATCATGTTCTTTGCCACAGTCATATAC
CCACCTTCTACCTTGGCTCTCCCTCCTCCTAACTTCCATTATTTTTTCTACTTTCAAACTATAATTGACAAGCCTTTTT
AATTTCAACAAGGGTCTGAAGAGAGGTGTCTGATTTTCCGTAAGGCTGGGTTATATAAGCACACAGAGTTGAATCAGAG
CAAAGGAAAAATCCATTGGCAAAGGAAGAATACTATATGCTACTTTAAAACTTGTCTGAATGTATTATTTTATTTACTT
ATTTTAGAGGCAGGTCTCACTCTGTCATCTAGGCTGGAGTACAGTGGCATGATCATCACTCATTGCAGCCTCAAACTCC
TAGGCTCAAGGGATCCTCCAGCCACAGCCTCCTGGGTAGCTAGGACTACAGGTGCACCCTACCATTCCTGGCTTAAAAA
ATATATATTTTAGAGTCTGTTTTGCCCGGGTTTGTCTCAAATACTTGGCCTCAAGTTATCCTCCCACCTCAGCCTCCTA
AAGTGCTGGGATTACAGGCATGAGCCATGGCACATGGCTCAAATTATATAATTCATTAGCTGGTAATAGTGTAAATTTG
GAAGAGAAAAACTAAAATGATAAAGAGGAAAGATGGATTGTGAATAGAGTAAATATATATTACTGTAATTATGTTAAGC

Fig. 9.266

CAATCAAATGCAAAGGACAGTTCAAAGGGGACAAGTATGTAAGCCACATTCCAAAAAAAAAAAAAAAAGCTTTGAAGTGA
AGCTTTAAAAAGATAAGCTTTGTGTTGAGCTAAAGAAATAAACTCTATAAAAACAAAACCCTAAAATTGTTATGACAAT
GAATTAAACATTCAAAAATGAACAGAACAGAATGTAAAAGATTATTCCTTCAGGTGGTAAATGTTCACAACCAGCTCTC
TATGGGGGAGGGGAAGGGCACTATTTGTAGTATTTGCTGATTTCTGTGCCAAAAAATTCTCTCACCTGCCCATTTCAAA
CAGCAGAGGTCACTAAATGTGGAGTTGGCAAGAGATACATAGACATAGTACTCTATACAGTGTTTCTATCATATAGATA
CAGTAGATATAAGTTGCCCCAAAAACATAATAATACAAAATGTAGCCAAATCATTCAGAAGTTATGAGTTTTGAATACT
TATTTCCATTGTTTTTAATATAATTTGTTTAATTATAGTTAAAAATTTTTATGTAATTTAATTTTTAATAACTGTTGGG
TATTAACAACTGACTTATAAATACTCCTAAAAATGTAACAGAATGTAGTGAGGGACAAAATGGATGCGGTCTCTGCTTT
CATCAAGTTTACATTCTGGTAGAGAAAGACAGAAAATAAACAAGTTAACAATAAATAAAATAAATAGAGACTGAGATGA
GAGGTTCTGCTTGGGGAAGCCAGGGAAACCTTTACAAAGAAATTGATAATTTATTTGCATATAAGTTCAAGCATATCCA
TTCCATACATCTGTGAGTACATTTGTAGTTCTAGGCCTGAAACTCAGAACTGCACAAGGTCAATGGAACCATATAAATA
TTGACCTCATTACTGACTTGTTTTCAGTCTCCAGTCTCTTGAGTGAATTTACCTTTGCTTCTTTGTTATTATAAAAATA
CAGTGAGGGAAAGTAAAACAAGGAGGAAGATGAAAAGAAGATGTAGGGGGAAGAGGAGCAGTTTACAATATACTTTCTA
TTACATTGTTTCACACTATCTCAAAACTTTTTATACGTAGAAAATACTAAAGCAAAGAAAAATGGAAGTTAAAAATCGG
TAGCAGTAGTAATAGTCCTATAGTAGGAACCTTGTTTTGTTTGAAATATGTGTCTGTGTCTGCCTACAAAACATAAACA
CCTTAAGCTAAGAATAACTGTGAGATTAATTTTTTATTTTCAAAGAAATAATACAAATTTTAAATCTTGCATTAAAAGG
AAAGCTAGCTGGACGAAACTTTTCTGACACACAGATTTTGAGAATAGCACCCATAAATATGCTTCCAATGCTTGTCACT
TGATCCCTTTTTGGCAATTAACTTGCCTTTAATTGATTTGTGGATTACCCACTGGAAGTTGCTATGGATAAAGGAATGT
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TCAGGAATTTTTCTTTTCACATAATGGCAGTGTTTAGATAAAGAATGGAAAGTTAATGAATCAGATTTGTGTTCCCATC
CAAAGGGAAGATTTATGTCCTGTTTAAGAATCACATTAATTTGATGACGTTAGTACATTCTCTAGTGAAAGAGTGGCCA
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GGGTTCTATGAAGTATCACTGCCCTGATCTCAGATGAACTAAAAGATGAAAACATTTCATCGCTCAAATAATTGTTTAT
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CTGTGTGGAAGATGACAAGGACGGCTTTGTGCAACTTCTGTTGTATGCGCTGCTTTTCAACCCCTTGGATGAGATACTC
ATACAAGGAACGTCAGGTTTTTTTCCTAAAGCAAATCCGTGTAAACTGAGACAACATAAACCTTAGGGAGATCTGACAC
ACCAAAATGCCAAGAAAGGGAAAGAAGAAATTATTATCGGTGGGGGAAACAAATTATCCTGTATTTTGGAGTGAATTTA
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AATAGCATAGATTTGACTACTTTTGAATTTTATATGAATGAAATTATACAATATAAACTCTTATTTTATTTCAGTCAAT
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CTACAATTTACTTATTCTAGTGTTGATGGATAGTTAAGTATTCCAGTTTTAGGCCATTATGAATTAGAGCCATTATGAA
CATTATTGGATATATCACTTAGTAAACAAATGTACATGTAGTGTTGCAGTGTTTTGTGCATACACGTAGGTTGGGTATA
TCCCAAGAGGTAGGATTTCTGGGTCATAGGTTATGCCTTTGTCTTTAGATATTGCCAAATGTGTTTCTATACTGGTTGC
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GCATCTTAAAAAATGTTTGCCTGTAATAACAATGTCATCATGCCTTTTATTTATGCAGTTGAGTCTTTTAATCTTTAGG
ACCTGTTTTTCCAGGAATAGTGTGGGTAACAGTGAGCCATTCACACTCTGTCTGTTTCTCCTCATGATGAATACTATGT
AACTGTGAATTAAGTGACTAAAATAAGAAACGATCTGATATGCAGAAATAGAGTTTTCCCTGTTTGATCCATATGCAGC
TTAAATATGTGATGTTATTCTACATTTTATCCAGATTCATTTTTCAAACCAATAGTAATCATTGTTAGCAAAAACCAAT
AAATAATCTTTTATTCTGTTTTAAAATTTCCATGTCGTACTTTGAGTTCTTGCTATATATCCCGTGCTCACTTTAAATC
AGGTTTTCCTTCCCGTACATTATTTCTTGGAAAATATGTTTTGGACTTTTCCTAAACCACCTTAACCTGTTGAAAAACA
CTAGTAAATGCATAGGCAGTGTAAGTCACGCTAAAATAAATGTGTATTGCTTTTTCAAGATTTTGTTTACCCATGCATT
TAAAGAAGGTTTTTTTCCCTTTATTTTCTTTCTTTTTTGTCATTATAGTCATTATGTCTTTTTAATGTTAAGATTCCGG
TAATATATATTCCTCATTTTTATGTCATCTCCAAAGCTCCCCATAACTGATTGATGATATCAATCCGGCTTCTGGCATA
TAAAGTTTGTTGACCTGGTTCAGTTTGTACCATGTCAAAATGTGATCATTAATTATTAGATGATGTCAGGAAAAATTTA
GTATGTGTGATAACTGTGGGTCCCATTTCTTAAAGCTTTCAAAATCCAATCTTAAGGCTCTCTACTTTGTGGCATATGA
GGGAACATAAGTAAACATTAGAGCAATATCAAACGTATTCTAAGGGTTTCATGATGTGAAACAATATATCACTTTATTA
CCAGACAGATACTTCACATCGTGAAATTTGAAAAAGCATACGAGGTGGGGCACAGTGGTTTACCCTATAATCCTAGTGC
TTTGGGAGGGTGAGGTGGGAGGATCGCCTGAGTCCAAGAGTTTGACACCAGCCTGTGCTACAGAGTGAGACCCCATTTC
TACAAAAAATTTAAAAATTAGTAGGGTGTGATGGTGCCTGCCTGTAGTCTCAGCTACTCTGGGGGCTGAGGGAGGATTG
CTTGAGCCTGGGAGGTCAAGGCTGCAGTGAATGTGATCACAGGAGTGTACTCCAGCCTGGGCAACAGAGTGAGACCTCA
TCTCTGAAAAAAAGAAAAAGTATGTAATTTTTACGTAAGAGTCACTCGATTCATATCATGAAGCTTGTGCTAAAAATGG
AATCATTCAGTGATCATGGGCTGCTTTTCAAGCATTTTTCGCTCACCCTTTACCATTATGACAGTAAACTTTGGGGAAA
GGGGAAGGCATGGGCCAATACATCTTTTAGTATTTCTTGGTTATACTAAGAACTACTGAGGAACTGCTAAGGAACAACT
ACATAGATAAAAAGTATTTTTATTATAACCCTTGTGAAAAACCTCTTCCCCCATAAAACGTTTAGTATCTTGTATGAAG
GCATAATGTACTTTTAAATATTCAAATCCAATTCCAGATTTCATTTATGTGCTATGTACTGTGTAATCCACCACGCAAA
ATGTAATTTCTTGCTTTTAATATAAATTTTCATTATTATCATAAATGAAGTCTCAGACCACAACATTTTGTTAGGTTGC
ATTCAAATGGTAATCATAATATGACCTATACCAGTTTTTGCATGGAAGGGCAGCAGCCGGCTGAACTAGATTTCCACTT

Fig. 9.267

TTGTCTTGGCTCATTAAACAACAATGGACAAGTTACCTTAACTTCATGGGTCCTCAACCTTCTCATTCGAAATTGAGTG
TATGGACTGTATATTACAATATCCTTTTAAGCTTACAGAAATAACATTATGGAGGTATGAGAAAATTGTAAATGATCCA
AGATATGTGCCTAAATATTTCTTCATACATCAAGCATGCATTCATGAAATCAACACCAAGCCCAGGAAATATCAAAGAA
TAGCTCAATGTCCCTGTGAACTTATATCCAATTCAATAATTCATCCAACAAATGTATATTGAGTATATAATCTGCTAGA
CTTATGAAGCCTTAAACTTTATGCTGTACATTCTGATATATGTTGTTTTAACCAGGGGTTGGTCAGCTTTCAAAAGTGA
CCCTTTTGCTAACATTGTTCTTCTGGCTGAAAGCTAGTAAGTATAAGCAAAAGGAGAGATGTATATGATCTCACTTCTA
TGTGGAATCTAAAAAAGTCAAACTCACAGAGGCAGATAATAGAAGGGGGTTACCAGGGGGTGATGGGAACAGGAGGGAT
TGGGGAAATGGTGGTCAGAGGATATAAAATTTCAGTTAGACAAGAGGAATAAGTTCAAGAGATCTACTGTACAACATGG
TGACTATCATTAAGAACAATGTATTGTAAACCAAATATTATATGTGGTCACTTATAAGTGTGACCTAAATAATGAGACC
ACATGGATACATAGGGGGGAACAACAGACACAGGAGCATACCAGAGAGGGGAGGGTGGGAGAAGGGAGAGAATCAGGAA
AAATAACTAATGGATACTAGGCTTAATACCCCCATGACACGAATTTACCATTGTAACAAACCTGCACATATATCCCTGA
ACTTTAAATAATAACAAAACCAAAAAAAAAAAAGAAAATTTCTAAGAGAGTAGATTTTAAATGTTCTCACCACAAAAAA
GTATGTGAGTTAATGCATATGTTAATTAGCTTGATTTAGCTCTTCCGTAATGTGTACGTATTTCAGAACATCATCTTGC
GCACTATAAATGTATGCAATGTTTGTCAGTTAAATATTTTTAAATGAATTTTTTGAAAAGAGGAGGGGTGTGAAAATGA
AGACTACTTCTGACTTTATATTTTATATTCTGGGGTTACAAGAATGAGACCTCCCTGATGCCTACACACAAATGGATTA
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TTGTCAACAATTTAAACTCTGTCCCATTCCTCCCCAAAATTTATGTACTTTAAAAATAGATCTCATCATTTCAACATTT
CAATTTATATATGAGAGAAATAAAAAGGACTAGTAAAAATTATATGAAGAAGCAACTCCAAATATGGTAATTTATGGTT
CAAAGGAGATAGGTAATTGTCTTCTCTCAAGAGCCACTAGACCACAAAATATCAACATCAAAGATGAATGCAAGCGCTA
GGGGAAACGATACAGATCAGAGGCACCATGTGTTGTGCATTCTGGTATTTGTCAGAGATAAGGAATGAAGCTGAATTTT
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AAATCATGGCTCTTCCACTTGCAGCTTRTATGACATTTATGAAATTCCTTAAGTGTGCTCTGTTTCAGGTGCCTCTGCG
CCTACATCATTAGAGTTATTCAAGTATTAAATGAGATAATACATATATAGCCGTTAAACTAGCGCCTGGCATAGAGTAA
ACAGTCAGCTCACATCAGCTAGCGTTATTCACAAGAATAGGCTATACATTTCTTTCCATCAAAGATAAGTGCAAGTTTG
AATAGAAAAAATTAATTTATGAAACAAGACTGATTTTATGCTTTTCTATAGTGCCCATGATTCAAAGGAAAAGAAGGAAA
TAATCACCAACCAAGTGACCCTGTAAAATAGATAGGAGTTACGCCATGCATACATACATGCATATATATGTATTTTGGA
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GATTTAAGTTACCAAACTATTGAAGGGACCCATGCACCACCAAGTATTCAAATCACAATATAATTTCATTATTCTCTAC
CCTCCCTTGCAAATGTAATAACTCTGAACTGATAAACACATTGTACCTGTGTAGAAAAATGCCACCCAGAAGGAAGCTG
ACTGCTAATCTAGGCCTGTGCTGTCCAACAAGAGAGCTAGTAGCCATAGAGCACTTGAGCTGTGGCTAATCCAAATCAG
ATGTGCTGGTAATGTAACATGCACAAAGGATTTCAAATAATAGTGTGAAAAAAAGTAAAAATTTTCTCATTTGTAATTT
TCATAATGATTACATGTTTAAATACTAATACTGTGTATAGGGTTAAATAAAACATATTTAAATTAATTTCACCTGGTTG
TATCTAAGTGTCCATCAGCCAATTAACGGATAAAGAAAATATGGTACATACACACAATGGAGTACTATTCAGCCACAAA
AAGGAATGAGATCCTGTCATCTGCAACAATATGGATGGAACTGGAGGTCATTATATTAAGTGAAATAAGCCACACACAG
AAAGACAAACTTTGTATGTTCTCATTTGTGGGAGGTAAAAATGAAGACAATTGAWCTCATGGAGATAGAGTGGAAAGAT
GGTTATCAGAACCTAGGAAGGGTAGTGAGTGGCAGGGGTGTGGGAGTGGAGATGGTTAATGGGTACAAAAATATATTTA
GATAGAATGATTAAGATCTAGTATTTGATAGCACAAAAGACTGATTGCAGTCACAATAATTTATTGTACATTTTTTAAT
TAAAGAGTATAATTGGATTGTTTGTAACACAAAGGATAAATTATTGAGGTGATGGATACCTCATTTACCCTGATGTGAT
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TGGCCATCATTCATGGTTCACATTATRTTTCTACTGAACAGCGTTGATCTAGACAGTAGACACTACGCAAAAACAGCTA
AGAAAATTATTAATTCTTTAAAAGGATAAAATTTAAAGTGATAAATGAGATCAAATTTTATGAGCAAGTCCATCGTAGT
TCACTCTGTGCTTGTTTCTAGGGAAAAAAAATTGGAACTTTCTGTAGAGTGTGCCAGTCAATGCAAAAGTGCTCATCAA
GAGAGAATTAAAACATTAGCAAATAGGGGCTGTTGATGAAAATGAGATTCCAGAGAGGGTGAGAAGACTGAACACATTC
CTGTAAAGCAACAGGGATTAATGCACCAATGAGAATTGCTTTTTTTTTTTTAAACAAAACAAAACAAAACAACAAAAAA
ACCCACTAAATTTTTCTAGGGGAAAAGTAAATGCTAGAGTGATATTAGTGAATTAGGGGATTTGTGAAGATGCATTTGA
ATGTCAAGAATATAATGTAGTTTTCTTAGTATTTTTGAATTCAGTGACCTTTTGTTAACCTCAAGAGACTGAGGCTAAG
ACACCAACATTTACCATGTGCTTCAATCATTCTCTCAAGGACGCACAGCTCCTCTGAGCTGTAATAGGAATTCAGGTCT
GTGTGACTCCTGAGCCCACATGACCGAACGTGTGCCCATGGAACACTGGTCCCTGCAACTGCTCTGCAAATAATGGTTC
TATACTTAAATCATTTTAAGAAATGTTGCATGTATCGTTACCGTCTTAAACATGATTCATTGATTTGCATATTAAAGGC
ACTGAGAATTGCTAAAAAACTGTTTAACTTTTTAAAATCTTTTTCTCAAACTTCTTTTGCCACAGAACACCTCCTCCCC
TGCACATGCATCTATATGCCATTTATCACCAGTTGCATGCTGAAACTAACCTTAGACAGAATGCTATTTGGAAATGCTG
AGATGCCTTAAATTGCCTTCTATCATCTCTCATTATTAGTTACTAAGGAAAATGGCTTTGAGAAAATATAAAATATTTC
AGGAAAATATGTAATTTGATGCTCAGATAACTCACTTTTTGCTACATCAGAAAAAGCAAAACTAGAATTTAAAAATAAA
CTTGGATGCATGTCTTGGTTATTCTTATATTCATAGTGTGTGATCCAAAGGGAGTCAAAGAAATCTGTAGCGAGGCTGC
TCACAGTCTAGGTCTCTTTTTGTGTAGGACAAAGGTAGGGCTTGGCTTCTAGTTGAAGCTACAGTTCTGTAGGACTTGG

Fig. 9.268

GATTTGGAAAAGTAATGACAAGATAAATAAGTTATCACCATCAGAGACCTAAATGGTTGCAAATTTGGCACTGGTTACA
TAATGAACAAAAGTTTCATAACATATTTCATAAGATATTTTCATAACATATGTCTTACAATTACTTTTTTTATTTTCTG
AGGTTTTTTCTCTAAATTATGCTAAAAATGTCATCGAGAAGCATAAAAACAGACTTTCATTAATAGTTGCTATAGCAGT
GGGAAATTTTTGTAGGAATTTAAGTAAAAAAGCAAGTTATTTAGCAGTTTTGTTCAAATTAGACATTTCTGCCATCAGC
CTGCCCCCTGGGAACTTGGAAAGTGCATACTTGCTCTTGAGTTCTGCTAGTGCCCTAACCACACGCCTTTCATGTCTAC
CATACTTCGATGATCTTGGATTCAAATATGATCCTCTGCCTTCCTCACAGAAAGAAACAATTTAGGGACATGGACTTAA
TGGTAATGACTTTCAAAAGCTAATGACGTGCAGTCTTTCGGCACTGCCTAGCCGAACACTCTTTAGACAACCTGCTGCT
TTAGACTGGACATGCACATGATTCCTAAGATACACTAAACAAGAATATGAGATGCTGAGTCCATTGTTTCCTGTGCAAA
ATTCAGTTCACCAAGAATACTATTTTCACCAAGAAAGCCATAGACTGTGTGTAGGTAAAGAACTTTTGCGCTAATGAAA
CTTGTTATTGGCTGGGACTAGGGGCCTAAATACTAGTTTGAGATTCTGTTTCTGCTGTGCCATATAGCATGAGATMCCA
CTTTTGCCTCTATAAAGCAGGGCTATGGTTATCTTTCCTTATTACCTCAGTTGATTGTTGGCTGTGAGAACCAAGTAAG
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ACGTGACATTGTGAAATCATACCRGATGTTCTAGTAGAACTGTGTTCTGGTCCTATTGAGTTCACCCAGGAGAGGCATC
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TTAGTGTCCTTATCTGTAAATTGAAATAATAATAATAGCTCATAAGGCTTTGTGGGGATTAAGTGAGATAATCATGTAC
AGTGCCCAGCACAGTGTCTACTGCATGGTAAATACTGCAAAAATGTTAGCTGTTGACTGCTCCTATTTATGACCTTCAT
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CACCACTGCCCTCCAGCCTGGGCGACAGCGAGACTCCGTGTCAAAAAAAAAAAAAAAGGTGGGGGGGGGGGAACTTATGA
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AAGCATGCAAGCTTGGTTTACAAAAGAACTGGACAAGCTCAGAATGGGCTAGTTCAGTGGAGTGACTGCTGCAGGAGCT
CAGGTTTTGAGACCTTCCTGTCTTCTTCCTTCATCCTTCTCCTCTTTTTGTGTTCTCTCCACACACTTTTCCTCATCAA
AGCCAAAACCTTTGTTCTTGCTATATTCTCTTTTTAGAGCCTGCTCACAGTAAAATTTTAAAAAAATGAAGAAGTGCTG
AAAGTGTAGATAAGCAATTAGACATGAGTTAATGTTTTTTATTTGCAAGAGCATTTGCATTCTAATATGAACTGAACAT
TGAGTAAATAGATTCCTGACTCCCTAACAGGGCTATGTCTTGTGTCAGGAAGCCAGCGCACTGGGCTTCTTGGTAGGCA
GGAGACCCAAGTCATCATCTGCTACTAAGGCTGGGTCTTGGAAGATGGAGAAGGCCGTAGAAGAAAGGAAAGCCAAAAA
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TCTAACAACATTAACAAAAACATTTTCAAAAATATAATAATAGTCATCAATAGGAATAAAGGGAAACAATCCAAAAATA
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TGTTGTTACTTCTTGAGCCAATTTATTCTCCCAGCAATGTCACTGTTACTGAAGTTGGTCTGTTCTTTATTCTCAGTTT
ATGAATAGGAATCATCTGAATATAGTTATAGACCTCTAGTCTAGATCATTTTTTGCAAAATTACAAAGATGGGAAAATT
TCCAAGCCATAGTTATTCCAAATGGCTGGGAGTGCCTTAGGAACTTATTTCTGGAGTCTTTTGAACTATTTATATTATT
GATATGAACAATGCCCCTGATTGTTAGTTAGCAATCTATTCATTGATAGGGACATGAAAGGCAGTCTGCTGCCATCTAG
CTTTTTAGTTTCTATCTTTAGGAATTTTCCGGTCCTTTCACAGAAAGACACTTTTTAAAGGAGCAATTCTTACTTCATC
CCTGAGAGGGAGACACTTATGAAGGTACTGCAGAATCTTAAAAAAAAAGTCTTCATCATTCTTTTACTTCTTTTTGCCT
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ACCCATAGGGGCAAAAACTATGTATTTTTAGAGGCAAAGATTGATAACCACAGCCATGACCCTGAGCAAGACTGTGAAA
TAGATGCAGTTCTTTGCCATCCTCCCTTTTCCTGAGTTATGGGCACTTTCTGCCTTCATAGCTGTTTCCTCTGCAAAAT
GGAGATTTTACTGTCAGAAGTCTCCTATTGCTATTGCTTCTTGGAGTTGGTTCCCATGCTCTGGGCACAGGAAAGCAAT
CTGAGATCTTCACTACTAGTATTTATTGAGCACCTATACTATGCCAGGACTGGACTGTGCTCTGAGGTCACAGTGGTAA
ACATACCGACATGGTTCCTGCTGTCATGAGCCTTCCAAAGGAATAGCGAAGAAAAACATTAAACATATCAGCCCATGAT
TAAATGCATAATTAGATAAAATGCATTGAAGAAGTAAAGATCCCAGGAAAGGAGAGAACCAATTAATATGATGGATGGG
AAATCAAGGCTGCTGGAAGGAAGTAGTGTATAAGCTGAAAAATGAGGAGTGAATAGGAATTAGCCAAGTGAAAAGCAGA
GGCAAATGGGTTTCAGGAAAAGGAAAAACATATGTACCAGTAACATTTCAAGAAGAAATGGGAAGGATTAGATGATTTC
TGTTATTCTTATTAGGTTGATCTCTTCCATGGAAGAGACACACAGAATGTAATTAATTTATAGAATATAAAAATGATTT
TTTTTTTTAGGAATGGGGAGGTGAGGAGAAGACCCGCTTCAAGTTCTGTTCCAATATTAATATGGTTTTGCTTTCTCTA
CAAACCTAAGTAAAACAATGGTGGTACCAAGGGTTGGTTGGGAGGCACTAGTTTTCCCAGTGTACATACTCACAACTAA
CATAAAAGCTAAATACGTATAATCAACATGCTTACACTACAAACACAACTTCAAATAAAATTCACTAGATCAACCGGGC
ACAGTGCCTCACACCTGTAATCCTAGCACTTTGGGAGGCTGAGGCGGCAGATCACCTGAGGTCAGGAGTTTGAGACCA
GCCTGACCAAGGTGGTGAAACCCCATCTCTATAAAAATACAAAAATTAGCCAGGCATAATGGCAGGTTCCTGTAGTCCC
AGCTACTAGGGAGGCTGAGGCAGGAAAATTGCTTGAACTCAGGAGGCAGAGGTTGCAGTGAGCCAAGATCATGCCATTG
CACTCCAGCCTGGGTGACAGAGCTAGGCTCCATCTCCAAAAAAAAAAAAAAAAAAAAAAAAAAAAACTCCACTGGATCCT

Fig. 9.269

CTCTTCCAACTTTTTTCCCCTAATTTCTTCCCTTAGCACTGATATTATCAAACAAGTGGCCAATCCTATAAAGGCTATC
AGACTCCAATTTAAAAAAACTATTAAATTTAAAAACACTCAGAGATATAATGATTGTATGCCTTTTATGAGGAAACTTA
GTACCTAAAAGAAAACCCTATAACTTAACATTAAGCATATGAAGGTAGCTATTATTCAAATAAGTAGCAGTAAAGACTT
TTCAGCTTTGGATCCTCATAAACAAGACCTGCAGGTTTAAAGATTTGCATACATCTTTTAACAATGCATCATTTTTATT
ATAGTATATTATATACTATTTTATATTTACTTAATGAGATTACTGACCTGGGTTTCAAGATATGTATGAAATATAATTA
GGATATGAAAATTAAAGATAAATTATCCCCACCAGAAATAATCTTAGCAGGTTATTTACTAAAGAATCTTAAATCCAGC
AGATCAAGAAAAACTCCCCAAGGAGTCTTTAATTAGAACTCTTTAGGATGGAATCAAAATCTCTCCATAAAAAATGAAT
CTTGCCTTAGGCTACATAAATTACAAAATCTGAAGCCCTTTAAGCAGCATTAAAACTGCTGATTTTAATTGCTCTGATA
ATGAACTGGAGAGAGACACACTAAGCTTCCTGGATTTCTGTTGGAAATGAATGGGATTCTTGCCAACTATGGATCACAG
TTATGAGGTATTCTGCACAGGGAAAATCAAAAGAAAGCAGATGGACCTTGACATGCTATGCCATCCTATGCCTTCTTCC
TTCCCAAGAAGCATGTTACAATAACTTTAAGTGAAGGTTGTCACAACTTTAAGTGAAAAGTCTCCCCTTTCTGTCTAAT
TTTTAATGTAACTTCCCCCTTCTCGATATATCCAGAAAATAGTTAATAACAATCCCTGAGGGAAAAGAAAAATGCTGCC
CTTCATATTAAAAAAAAGAAGATAACAGAGATCCCCTTAGTGGTGAGTGATTTATAGTGAAAACAGCCAACTCATTCTC
TTTTGCCTCCTTTTGACCTAGAGAACTGGATTCGCGGATTTGTAACTGGATTTTGATTATAGAGTATGTTCTATGGCTA
CAAAAGAGTTTTCCTTTGAGGAAAACTCAAACTGCCAACAGATATGCTTGGTATATCAGTTTTCAATGCTTTCAATTGT
AAATAACAGAAACCTGGACTCACAATAGCTTGAACAAATAGGAATTACTTTTAAGTAGGTGGCACCGGAGGTGTTTCAG
CTGTTGCATGATGTTATCACCATTTGCAAAGAGGCAGCATCTCCACAATTTTCTTGGCCTGTTCCTCTTGATGGCAAAT
GGCTACTGCACGTCCAGATGATCATGTCTGTGTCACAGATAGTGAGAGGGAAGGAGGAAGGATGAGAGAGGATGGCCAG
CTAAAGTTGTATCTACCCCACTTATAAGAAACACAAAGCCCTTCCCCAGAGCTTACAGCCCTTTAGCCAGAACTATGAC
ACATGGTCATCTTGAGTGCAGAAAGATGGAAGTTAACATTTGGTTTTCTGGTCTTTTTAATAAAGATAGCAAGGATGAA
GAAGTTTGGAAAAGACTGTGGGCTAGCCAATCAAATTGTCGACCACATTTGGCCTGTATTAATGTATAGTTTTTAAAGC
CTAATGTCAATTTGTTAAGGTGTCTTAAGGACAGGAAAATGGAGAAGAACTAAGATTTTTTATATCAAATACAGAGTAA
ATCTTGGAAAGGGTGAATTAGAGTGGAAAATAAACTAGACATTATCTAAGAGTGCCTTGAAGCCAGATCTTGCAAAACA
TTAGGCAAGCATGTCACTCATAATGGACCCCAGGGCTTTCCATCTCATAATGTGGATAAAAATAACAGTGTTTCTCTCA
GTTTTTAAAAATGTCACCAAAAATTCAATAAAGTATATACATACATATTGTAATTGTTTAAAGTAAAAATTTTATGCTG
TTTTGGGAAGAAAAATAACCAAAAAAAACCATCACTGACCATTGGTCATCAAAATCTGATTTATGCCATGTTTACAAGA
TAAAAACAAGAATAAATAATAATTGTTTGAAATATTTTCATCATATTGCCTCTGAAATGATTGATGTCATACTGCCTGG
ATTTAGTCAACTCAGTGAATGATTTATCAGTAGCCATGCTCTAAGGAGCTCTCTATTCATAGATACTTATGATTTGGTG
AACTGGGAAACCCACAGAGAAAGGTAAATGAAATAGGAGAGCCAGGTAAATGGGCCATGGATCTAAGAACCAGGAATCA
TGATTGTTTGGAAGAACATATCTCAGACTGAGAAAAGCTGGCGCTAAAGTAAGCTAGCATTTGATTAGAATGTTGAAGG
ATAATTTCATTCTTGGAGACAGAAAACCTAAGTAGAAGCAAAAGAAGTAGGAAATAGAAGCCTGTGTTTGAGAGATTCA
GAGTGACTGTGTTTTATTAGAATTGCAAGAAAGGGAACTTGAAAACATAAATTTAACATGGGGCAACAGGCCTTGGATT
CTGAACAGAGGGACTTTGTTTAAGGATGGCTCTGTGGCTGTGGAACAGTTTTTCTATAGATTATCAAAATGATTCTGGA
AAAGAAATGTCATTCTGGACTGAGAGCACATACCATAGGGAAAACATGAGGCTTATGGGCTGAATTGTGTCACACCCAA
AGTCATATGCTGAAGTCCTAACCTAGGACCTCAGAATGTGGCTTTATTTGAAGATTGAGCCTGTAAATAGGTGATTTTG
ATAAAATGAGATCATTAGGGTAGACCCGAATCCAACAAGGCTGGTGTCTTTATAAGAAAAGGAGATTAAGATGCACGCG
CACACGCAGAGAAGACTACGTGGAGATGAGGAGAAGATGGCCATCTACAAGCCAAGAGGAGAGGTCTCCCGAAGAAACC
AACCCCACTGACATCTTGACCTCAGTCCTCTGGCCTCCGGAACTGTTTTAAAACATAAGTTTCTATTGTTAAAGCCACC
TAAGTCTGTGGTATTTTGTAATGGCAGCCCTAGGGAAAAACTACAATGAGCAAGTATTATTTGTATTTTAAGAAATAAT
ATTATAAACTAAATTCATGGAGGGGAAAATAGAAAAAGAGGTCATTTCTGAAAACATTGTATAGGTGTAACATAGTTGA
CACTATCAACTACTACAATGGGATCAGGAGACAGAGGGTCAGTGATAACGGAGCTCTCAAGACTGGAAACTGGGCGATC
CAGAAGGACAGGCGGTTGATGAAAGAAAATGATGAGTGTGGTTGAGGCTGCGTTTCCCTTGAGGAGGTGCTGGTGCTCA
GGGTAGAGGCATCCATCACGATGTCAGAAATGTGTGTCAGACACGAAGGCAGGAATGAGGCTGTCGAGGAAGCCATGGC
AACATAAACAGAGAAGTGCCACAGCGAGACAACCAGCCAATGAGTTGTGTAGTTTCTTGTAAGTAGCTGAAACAACATA
ACCAAATTGTTCAATTTAGTCTACATATGAAATTTCAATGTCAGAGAAAGGCCTTTAATCTCAAAACGAAATAAACTAA
AAGACATTATTTTCCTGACAGCTAAGTCTTAAAATTTCTTTTGAGAAATAAAAAAAATGGTTTTCTCTTTTAACATAGA
GGCAAACCAGTAAGTCAGATACTTCAGGGGAAGGTAGCTTGGTGATTTGAATGTATGTGAGTGTGAATACGTGAGATTA
GAATCTTACCTGAGAACAAATTTTCATGAGCATCATTGGAGAGTGGGAGAGCATGAAGACTTTTACCCTTCTCTCTGCA
GGAGAGAATTGTGCAGGAGGAGGTGGGGAGAATGCCACCAAGAACAGGTTGCCTGGGGCTAGTTTAGCGATGGGGTCCA
AACGATCTCACTAATGTGAAAGGATCATAGTTACCTTACCAAGGGAAAGTTGGCTTCAACTATATATTTCACTTCTGTA
CCAGGTTTTGCTTAAATGCTACTCTTTGGAGAATATCAAGAAATTTAGATGAGTTTACCAAATCCAAGATTGTGTTCCC
TGCTTTTAACTCTTGTTACTGAAATAGCCCCCTGATCCCCAAGAGTAATGCTTGACTGAGGTGTTTGCATGAATTGTTT
ATATCATTCATTAATTAACGTGATGAACATATTAAAGATAGGACTCCCAGTTTTCATCCCAAGGGCTTACATATAATAG
TAACAACCTTTAGAAAAGTACTGCATTGTTTATTTATAGAATGGCTTTGACTCACTTAATAATGCTCCATAATTAATTT
GTAAATTACTTTTTGACTTTGCACAATTATAATTTAATGTCATATATCTGCAAAAGAAAACACTTTTATGTTGCTAATA
TTAATTTCCCTTCATAAATTTGAGACTGTTTTGACTATAGATAAATGTAAAATGTCAATGTGGTGAGAATGACTCAGCT
TCTCAGATATTCATTTATTCTATAAATATTTTTGAATACCTACTATGTTTCAGGCACTGATCTAAGTGTTGAATAAGTA
GACAAGGACAGCCTGCCTTCAGGTTTTTTACATTCAAATAACACAAGATGATGAAGAAATTTTTAAAATAATCTGGTTC
CATTTGGCAGATAATATAGATATGCTCAGTTTTATAAATTTTGATACCTAAAGTATTGTGATAATCCAAATCATGACCT
TTAGACATTACACTATGCTTATTGATTGAAGGTTGACATATGTTTAGCATATTCTCTTATAATGTATTTAAGGACTTCA
GTGAGTAGACAAAAGAAGTAAACTTGATCAGACAACATGATTTCTGAGAACAGACTCTTCCTGGAGCAAGCATTCTGGT

Fig. 9.270

TAGATTTTACAGGGCTTCAATAAAAAGGTATATGTTTATGCTTTTTGCTAGTTGGGGGTTTCCTAGCAAATGATTCCAT
GAAAACATTTGCAGGGAATTCCCATCTGTTCTATATTTCCCTGATTTGGGGGCTCTGAATCAATAATGCTGATGTAACA
GTTGGCAAATTAGATAAGAACAGCCCGAGACTTCCTTTTCCATTAGGTGTAGTCTCATGGAAAATCACCCTTGAATCCA
TCAATGGAATGAAGCAACTGGGTGGAGCCTATGGGAAAATCCTGGAGGAAGTCCCCAACTAGTCAGCCTCCCCTCTCTG
CCTTGCACTCTTGGATTCCTTAGCGAAACATCCAAAATGGCCTTCTTGCAAGGAGGATGCAGTCGGTGATCCACATACT
GACCAACAGCTGTGTGTGAAAGGCACCGTGCCCACCACAACAAAGGGGCAGTGAGGTCTGCTGAGCAGATGAGTCGCTT
TTCTGGACCCTTCCAGGCTTGCAGTTGGCTCAGATGAAAAGCTCAGGCTTATGAGCTGCCAGAAAGTATTTGGCAAAAA
GCCCACCTTTTTTCTCAAGTACACGTATTCAATTGACTTGATTCCTCAGAGAGATTTGTGAGGGTGAAAGCAAGTTCAT
TGTCCACTTTTAATGACCCTCAACTTCTAATGAGGTAATATATGTGAAAGTGATTTTTTTAAATGCAATGCAAATACAG
GGTGTTTTTAGTCATTATTTCAGTACCTGAGGAAAATGTAAAAACACAAAGCCACACATGTACCAAGGCACTACATGAG
TGTACTTGGTTTCACCATCTAATTTAGCCCTCTGAAGTGTAGAGTCCATCGAGGCTATTATTTTGTGGATTGTGTACTG
AAGTTGCTTTTCTTTGTTCTCCCAACATACACTTGTGACACTTCCAACCTCTGATATGTATATGTTAAATACAGGCTGT
TTTTCAAACAAGATAAATCAAATGCTAGCTAGGAAGTGTGCCTAGAGTTTAAAGCATTCTAGAATGTACTCCCATATAA
CAGCTATACTTATATAATACCTACATTGTGCCAGTGTTTCATATATGTGAAGTGCTTTAATCCTCACAACAAACATAGG
AGGGATGTAGTATTATTACCCCCTTTTTACAGATGTGAAAACTGCAGTACACAAGGTGAAGTGAGAGGCCCCAAATCAC
ACAGCTAGTAAATGGCAGTGTCAGACCTCAAATTCCACTAGTCTGTCTTCAGAGTCTATATAATTAACCACTGCTCCCT
GTGCTTTTAAAGGTTAGTTTAATGGATATTGTGCTATTTCTAATAAAAGGATATAATTTTTGTTATATATTTTTCTTCT
TAGTCTTCACTTTTGGATCTTGGACCACATGTGCTATTATCATATTTAGCTCATAAGAGACTTCTCTGATAATTTTGT
ATAAAATACACTTATAGAACATTTGTATCTTGTAAATGTAATTTTTCTTACCATTATCTCATTTGATCCCCCTTATCCA
CCTCTAGAATATACAGAGCTTTATCCTCATTTTTCAGACGAAGAAATGGACCAAAGAAGACTAAACAATTTGTTCAACT
CCATATCACCAGTTTGTAGCAGTTCTGTGACTAGAAACCAAATTTCCTGGCTCTTAGTCCTACATTCTTTCTAGTATTT
CAAATCATCTTTTCATTTCTCTCCCTTATGCTTTTGGAAAGAAAATTGAGAAGAACGTTAAGAACCCCAGTAAAATTGG
AGAGGCATTTCTTGAGAAATATTTAAAATAATTTAAGAAGTCTTCACAAAAGTAGTAGGCAAAAATGTGTTACATTAAC
AACGGATCTCATTAAGTCAGTGCATACAGCTAGGTTCTGGTTTATTAATTTTCAATTTTTTCATTTTGGGCCTGCCTA
ATCTGAACACTTTGCAGTACAATTCTGAGTGCTCTCATGCTTTGTGCTATCGCTTTCTTAAGGTAGCTCATTTGCACTT
GTTCATCATCCTGTTCCTTCCCCCAGTCTCCTGGGCTCTGTTGCTAATTATTGACCCAGGAAAGCCTCAGAAGGGGCCA
AGGCAGCTAAAATTGGAGTGCTCTTTACTTAGACTTATAATGCATTTTCCATTTTTCAGAAAGAGTAAAGCACTTTTAG
CTACCAGATCCAGAGACCATTCAGTTATATGGGCACTTGAGTTTCTGCTAAAGAATCACAACTCAATTTAATTTTTTTT
TTTTTTGGTATTTCATTCACAGCCAGTCTGGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTATTTCTGTT
TCTGTATTAACATATGAGACAGCAGAATAATAATGTGTCCATTCATTCCATAGATATTTCTCAAAGAGTTGCCAAGAAT
AAAGAATAGTGCTAAAAAAAGGTGGAAGATGGTTAGGTGTAAAATTACCTCCTCTCACAGGACCTGGCACATGACAAAT
GCTTCAGAAATATTTATCAAACTGAAATGAGCTATTACATGAATTGTATTCTCTGGCTTTGGAATCTATTGGGGAAATG
ATGAAGTCATTAAATATATGCGAATTGGAAAGGAATTTAGGAATCATCTTATGCAGCCCTTTTACTTTAAAGATGAAGC
AATGGAAATGCAAGAAAGTTATGTGTCTTTTCCAAGCAAGATCACACATCTATTTCGAAATAATATGCTTTTTTTCATT
GTAACATGTGTTTTAGAGATTACACATATGTCAATGTCTGTAGTGCAGGGCATAATGTGAGGAGAGCTGTTGAATGCTT
TAGAACAGTGCTACCCAGTGGAAATATAATGCACACCCCATATACAATTTTAGATTTTTATTAATAGCCAGATTTTTAA
AAGTTTAAAAGTCAGTGAAATTATTTTTTTCATACTAAGTCTTCAAAATCCAGAGTGTGTATTATATTTTTGACACATC
TCAATTTGGACTAGCCATATTTTAAGTATTTAATAGTTATATGTGTCTTGGGGGGGGCTACTCTATAGACTATATGGCT
CCAGAATCACAGAGAGGGAAAAATAATAATGTATTTTTAAAGCTGCAGTATTTTTACCATGGGTTATATTTTTAAGTTT
GATTGTAACACAAAAGTACAAAAATGAAACAAACTGACTCAACACATTTTTTTTCTTTTTTTTATTATTATACTTTAAG
TTTTAGGGTACATGTGCACAACGTGCAGGTTTGTTACATATGTATACATGTGCCATATTGGTGTGCTGCACCCATTAAC
TCGTCATCTAGCATTAGGTATATCTCCTAATGCTATCCCTTCCCCCTCCTCCCACCCCACAACAGTCCCCGGTGTGTGA
TGTTCCCCTTCCTGTGTCCATGTGTTCTCATTGTTCAATTCCCACCTATGAGTGAGAACATGCGGTGTTTGGTTTTCTG
TCCTTGCGATAGTTTGCTGAGAATGATAGTTTCCAGCTTCATCCATGTCCCTACAAAGGACATGAACTCATCATTTTTT
ATGGCTGCATAGCATTCCATGGTGTATATGTGCCACATTTTCTTAATCTAGTTTATCATTGTGACTCAACACATTTAAA
AAAAAAATCTAGAGTAGACCTATACAATTTGACAGATTGCATCAATAGTTACAATTTTAGACACCCCTACCCCTCCACA
CATAGAAATTAGTGAATAAGCAGACTGTCAATAGTACTGGCTCAAATAATTCTACATACAAGTTCTACCAAACTTTCAA
GGGAGGGGTAACTTCTACCTTATACGAATTATCTCATTTTACAAGTAACTATAAGTATACAATAAGTTCCATTTGCAGC
ACTATAGGAGCTTGAACTGTCTGCCAATTTTTAAAGAATATGCTCAAGCAATAATCTTGGTTATCCATATTATCTTACA
TTTCCTTATGAATATTGAGAGTTCTGTTATTGATAAATACAAAGGTGTCACTGTTTAATACACTACTGTGTAGGTCCTT
TTGCTATGCATTTACTATTTAAAGCGTAAAAACGTAGGTAGCAAGAAGATTTATCTTTCTGGCTATTCTTGAAATTCCT
GTTTCTAACAAGATATTCTGCAGAAGCAAAGATACTACTGCATTGTTCAATGTTTCCACAAAAGGTTAATATAATTGTG
GGTTCAGCTATCACCTTGACCTTTTCTTGGATCTTTGATCAGAGTTTAGGTAAATATGTTGTTAGGTTTCCCCCTTTTA
AGTTCCTGAGCTTTTGAAGTAAAACCAGAGCTGAGATAGGAAAGTGAACAGCAAGGGGCAGAGCACAGCAGAAACTGAA
TTAGGTCACTTTTCTAGAGGCTTCTGAATTTGGTACAGTAGGATTTCTGTGATCATCTTAAACCTAGCTTTTCAAAAGG
CTATTACTGTTCCATTTTATTCTCTGGCCCAGAAAATAAATCAGAAGACTTCTACATCCTTTTCCTCAAAAGCTGATTC
TGATTCTCTATATGATGCCACATTAATAAAGTTTTCCCTATTAATTACCATGATGCCATGCAGCCTTCTAAGATGTTTT
CTTTAGTTCTTAGTTCCTTTGCAGTTCCATCTCCAAGCATAAATTCTCATTAATAATCAGTACAGTGAGGAAGATAGAC
ATGTGTCAGTCAGTGAGAATGCTTGCAGCTGTAACTGCCAGAAAGTTGTAACTTAACTGGCTTAAACCAAAGCCATCCT
GAGGTGGGAGGCTCCAAGTCACTCAGTGACATTATCAAAGGCGGCCTGAGTCTTTTTCATCTTTCTCTTCTGCCAGCCT
CAAGTGTTGGTGAGTTTTCTGGTTTGTTCCTGTAAACTCGAGATGTCTGTCACAGGTCCACCTATTACATGCAGATAAC

Fig. 9.271

TATGGCCAGTCAGAAAAGAGGATCTTCTTTTTACGTCTTCTTTTAAGAAAGAAAAAAAATCATTTCCAGATGGTCTCCC
CTTGTCCCACTTCCCTTCAATGTCTTATTGGCCAAAATGGTTTCACATGCCGATGTCTTAACAAATCACTGCCTTGGAA
ATCGTACTTTCATGATTAGCTGAGACAATCAGGTTTCCCTCATGGTGGCTGGGGCTGAGGCCCACCTCCCTGTAAGTAT
GTGGCTGCAAGGGTAGGTGGATATTTGAATTTCACTGGGGGCCTAGTAGGAAGGAATGGCTCTTGGGTAGGCTACCCAT
AGAGTCAACTACAAGTAAATCAGAAACTATAGTATCATAAGTGCTACAGGGAAACATGTAAATGCAGGATGCTGTAGGA
ACACGCAAGAAGGGCCCCTGGCCATGCTTGCTTGAGCAAGAGGGAGAGAGGAATGCCAGAGTGGGCTTTTAATGAAAAT
GTTATCTGATCTGAGATATAAAGCTCAAGAGGAGATAGCCAAGGAAAGGGTGGTGGAAGGAGAGAGAGGGTATCAGGTA
GACACAGTATCATGTGCAAATGACTGGGAATAAGATAAAATGTGGTAGGTTTGGGGAGATGCAGAAAAATTAGTTGGCC
TAAGGTATAGAGCATAAGTTGGGGAGTCAGTCAGAAATAGGGCTATAGAGGTAAACTGTAGATCATAAAAGATCTGATA
AGTCACATAGAAATTTCTACTTTATTCTGCTGCAGTGGGGAGCCAGTGAAATATTTTAAGCAGCAAATGACATAATTAA
ATATGCACTTCAAAAAAAAAATGTCTTTGGCTGCTGTGGGAAATTGGATTGCAAATCTTCAAGACCAAAAGTAGGTAGA
ACATGTGAGAATCAATTACAATATTCCAGGAAAGAGTGGTGAAGGGCTTTAAGATAATGTCAGTGGGGCTGGAGAGAGG
TGAATAGGTTTGATTGATGTTTAGGGGTTTTGACTAAACAGGACTTGGTTAATAGGTAAGAGAAATAGGGATTAATAAT
CACTCACATTTCTGGCTTGGACAACTAGGAGGATGGGAATGACATTTACTGAGTTAGGATATCCAAAGAAGAAGCAGAC
TGGGGGCAAGGGGAGTGAATTAATTTAAATTGTAACTAATGAAGGGCTTATTCTGTATGAAATTCAAGAGAAGTATTCC
AGTCCTTAAAGCATTTTCAAATGCCAAGGGATATATTAACCAATAAGTGGTATAGAACAATACTAGGGGTACTATAATT
TATCACAGATGGTCATCAATAAAGCAAGAGAGAGAGAGATAAAAGAGCTTAAAGAAGAAATTGCCTCTCTCTCAGAAAGAA
TTAGTGGGAGAATCTGATGTTCTTCATGAAAGAAAAAAATTTAGTTGAATCTTGCATAAAAAGATTAGACAGATGGGA
ATTGTCGAGGGTGGAGGCACTGTACACTACATGAAGCATATTTAAGGAATGATAACAGTCTAGATTGCTAGCAAGCTTG
AATAGGCAAAATAAAATAGAAAGGTTAGGGAYTAGTTGAATTAGTCAGAACTGTTGAGATTCCAAGAGAAAAACAAAAT
TCACATTTTCTGTGTTGATCTATTATTGCAAGGTGCATTAGTCAGCTATTGCTACAGTAATGCTACCGAACAATCAACT
ACAAAATACCAATGACATTTGCTTCTTGCTCATAGTCCTACTAATGGGTCAGAATAGTGCTGCTTCAGGCTGCAGGTTG
CCTTCATGCTTGTTCTTCATGTTTCTCCTTCTTGGACCAGTGATCTCCCAGGGCGTGTCCTTGTGGCACAGTTTACAAC
TCCCAATGTGGCAAGTAGAAATGTTCAATACTTTGTAAGGCCTCAGTTTATAAAGCAGTATCATTTGTGCCCACATTCT
GTTAGCCACAGCACATAATRTGACTAAACCCAATATCACTGAGGGAGGAGAGCATGAGGAAGAAAAGGATGGTGAATAT
ATGCTGCAATGCCTAAAACATAATGTAAATATAGATAGCATTGGATTTGACCCATAAGCCATAAAGATTCTAGAATACC
AGTGTTCCCAACTATGGAGTGCCCAATGAGCTTCTTGACAAACTCAGGAGAGTAACCTCCATTTGTGTGACCTCCTTTC
TTTGCTCTTTATTTGTGCTTTTCAAAGGGATGACATGAGCCCATAAACTACTCATTGGGTTGCTTGGTCAGAATCAGAA
CCAGTTACTTCAGGACTGTCTCATTTCATGATTAGTTGCCTTTGGTCTCATGCAGTGGTATCAGTTCATTCCTCTAGAG
GTTTATGTTCCCTCAATCACCAGCAATACTGAGTGAATGATAAGAACTAAAGCAATAAAAAATGATTGAACTATTTTCC
TTAGTATGTAGTTATTGGACTTCTTCCAAAAATCCAGCACACTTATAAAAACCAAACTAAGGCATTTTGCTGGTTATTG
TGCCAATAGTGTGTCTTAATTAGTCCTGAGAATTTATGTGGCCCATGAAAGAGGCATAATTTTCCTAAGATTGCACAGC
TAAGTTACATATCTGAGACTTGAAGACATCCTCAGATTATGTTATCCCTAAATCTCTAATTGCTWTGTAGCAAAAGATT
TTAGCCATTTTTTTATTCCTGAATCAAGGATACATAAATAAAGTTGTATTCAATCAATCCAAAAATCCTCAAGCCCAAA
TAATCCTAGTACTTGAGCAGACCTTATAGTGTGTGTGCACAAGTGCGCATGCGTGTACTCTATTTTTAGATTATCTTTT
AAGAGGGACCGGTGACATGGTCATACAGTACAACAGAAGAACTCACTCCCTGTTTCTCTATAATTCCCATATTACACTC
AGCACTTGCTCTCCTTTCATTCTGTGGCTTCTGTGCTGCTAGCAGTGACCAGTGACTCAGGAAGGCTGCATATAGTGAA
GAAAAAGTTGCCTTTCCAGGCACAGTTCAGTCCTGAGGCGCCTTTTCACACCATCTCATAGACATTTCAGAGCCAAACT
CTAGCTTTCTTTTTATGACTACTTTTCCATTCCACACTTTTCTTAATGTTGCAGGAGATAATTTGAAAGAAAGGAAAAA
AGAACAGGGAGAACACAAAGGCAAGAAGATGAGCAAGATGCCAGATTTAAGAAGTATATTTATATTTAGTTCTTTACAA
ATTAAATTCTGCTGAGACCCTTAAATATTAGCTGTCACAGGGGTTGTGCTTGAAAAACTTGATTCCAACCCTAAGCATA
AAAATCTTGTCTAGGCAGGGCAGTAGATTGGAGGATTATCATTACACATTATAGGAGGAAGGCCCTGTTCAATGCCAGG
TTCCAAGAATGCCATCTCAGGGAGCGAGGGAAAGACATAGGCCAGGTAACATGTCTGATGTATGGAGAAAAGCCCTCAG
GGTGCCATGTTGGTGGAACAGGAGCAGAAAGGAAATCAGACTGAGAGAATGAAAACTCAATAGAAGCACAATAAACAGA
CTGAACAAAGTACAGATGGAGTCAGTTCAAGTTTAATATGAATGTCCCTGGCCCCTGTGTTTCATCCCAGTGTTAAGTG
CAGGAAATCATTGGATTTCTCCAAGGATGGGTCTTTAGAGCAACCGACTTTAGAAATTGAATACTTTAAAATTATTTTC
TATAAACAAATTTATCAATAGAAAAAATAGATTACTTAATTGGTTTATCTTAATGAGAAAACAACAAAAAGCTTCAACA
AATAATTGTTGCTGATTGGTTGGTGGGTTCGTTGGTGAATAATGAGAAGGAAAGAAGGAAGAAAAGAAAAGAAGGAGTA
GAGGAGGAAAGGAGGTGAGAGAGGGAGATTTGAAAGGGAAATAGCGGTGCTCTAAGTTCACAATTTTTAAAAGCCTAGA
GTTATTAACAAATTATGCCCTCAATCAGATTTTATATAACTTTTTTCAATCTTGTCATATATTAATGTGCTGTATTCAT
GAAATGATTTTGAGATTTTAAAGCAATGATTGACAATATAGTAGTTCATTTAAAGTTTTTACAAGTTGCTGCTGACAAA
ATATGGGTAATGAATTACATCAAATAAGTATAAATATAAGTACACGCTTTGAAGTTAAAACTCAGTAAGTTGTTATGAT
TAAAATTGTTCACTTTATTTTCCTCCTGTGTATGGGTTTCTCATAAATGGTAACTTATACCTATGAAAATACAGGGTTC
TATAAAGTCTGAAAACATAGTTATTATATATCTTAACGGACCGAAGATGTCCTTCCTGATATTATGTATAGCCTGTGTT
TCCAGACTAAGTGCCAGGCACTATTCTAAGTTAGGCACGATTCTAAGTGTTTTACTGTTCATTTAGGCTGTCTGGCTAG
TGTTTTTCTCACCTTATCAGCATCCCATTTTTATTAAGTGAATTTGCCTAAACACACCTGCACACGCACATGCATGCGC
GTGCACACACACACACTTTTTGCATTTGGAAGCCTGGCTATTATGGAACTCTAGAACATGAGAGCTCAGGGTCAACCAC
CAAGACTCAATAAGGTATGGCTGGGGATGTGACCAAGACTATCCTAGCATCTATGGCTGTGGACTGGGTGTCTTCTCCA
CTGACCCTTGAAGGTAGTTTTGCTTCACTGCTTTAGAAATGGTGCAGAGACTTAATCTTATTTCACTTTTCGGTGTTTG
TCTTGGTTCCTGTAGAACTGGCTTGAGGCTTAGAAGATGTCCTCCCACCTGCATTTGGAAAAATACATTTCTAACACTT
CTCCTCATATGGAAATTTTTAAGTCATTGAAAAACTCATACTGCAGCATTTGTAGAAACAATTTCAGAACAGAGTACCT

Fig. 9.272

TATTGCTTTTCCTAAAAGAATTTTAACTGTGCATGTATAAGTATTATAAATGCATAAAATATATAGTTAATCCAAAAGA
CATAACTATATCATGCATAGTAGTTATAGGTCACCTCAGATATATTAGTAACATCTTTTTATAGAGACTCTGTTGTTAT
TTCACTCACACAAAAGAATAAACACAGAATTAAGGTTGAAATTTACATAAGACCAGTCTAAAGCCAGCCATAGCTATGT
AATTTCCATGATTTTCTCCCAATCAATGGAAAATTACTGTCAGCTGAGCCAAAGTCTGCAGACTGTGAGCAAATGTCTG
TTTCCTTCCCACAACTGAGTGTTTGAAACTTTTTTCAATCAGTAAAATTACCATTAAAGGTCAGAGATTAGTTTTTCAT
GCATGATGGATTCCATTTGCTTTAAAAGTATTATACCAGGAGAGTAGACTTTTTTTCTGACTTTAGAATCAAATTAGAA
TTCAAATATTCAGAGTTTTGGGTCAACCTCAAACTATTTTATTTTGTTTATTTTCCCTTGACAAAATGTTATTGTTTTA
AATAGGGAAGGAGAAAGGTCTTGGGAAAACACACACACACACACACACACACACACACACACACATATATATGTACTCTCT
CATATTTGAAATTAGCATGTAGTTTAAGGATACTGCACACAGCTCTATGATGAGCTTAACTTGAATCTCCTTAGATTAT
GAGCATTTTGAAAGCAGGGACTTGATTTTTTAACTAAATACCTTTCATGTTTGATAACCTGTTCCTTTTCCTGTGTGTA
TTGTCTTAACTAAAGACTGCCTGCAATGAACAGAAGGGCTATGGTCTTTTTTTTATTAAGATAAAAGAATTTTCCAAAT
CGTTGTTTATAAAATAAAAGATTAGAAAAATTCACCTGTGTATAAATTGAACTAGACTTCTATAACATAGCAGCCATCT
TGTGCAGAAAGGGGCTGCTTACGTAGTTTATTTCTTTAACACACAGTTGCTAATTACAAAAACAGCATGCATCCAGAGA
TTGTGAAAAAAGAAGTTAAAAAAAATCTTGCCTATTATTCTACCACCGTAACACAATTATGTTTAACATTTTTCATATT
TTTAATTTATTTTCTCTTTCCATAAATTCTAATCTGTCTATAAATGTACTATTGTGGTCTGCTTCGTTGACTAACAGAA
TATTTTCACCCCTTTCAGAACCCTTTTTTTAAAAAATGGCTTCTTTTGTGTATTTGAAACAATTTCAACTTAACCCTAT
TGCATATATTCTGTAAGTAGCTGTCCTTCATGAAACAGACAACTTTTTCTTTTAAAAATCAAGGAGATTGTACAGAACT
TTGTGATTTTAATTACTGCATGGCAAACTAATTCAGTCTCATATCCTTTCCATTTAATAGGGATTTGTCCCTAGCTATG
TGACCTAAGCAAGCTCTTTAACTGTACTCCACCTCAATTTGCTTATCTGTAAAACATGGATAATATTATTTTTAGTCTA
AAACTTCCTCTGGTATGACAGAAAAGACCAATGTGAAACAATTCCCTGAATTTGTCAATAAACCATGTTACATTTATAA
AAATGCCTCCAGTGTACCCAGACCAGAGGAATCTGTGGCTTATACTAAAACGTGTATTATGTATTCATTCTCAAGGTAT
ATGCCAACAGTTAAGTTAGAAATCCATCCCTTTCTCTGTCACTTGTCCAAAGTCAATTACTCCATGCTTCTTTTACATA
AGGAAAACTATCTTAAAAGGAGGAAGTAAGATCACGGACAAACAAAAGTTCATAAGGTCTTTCATTTTACTGCCTTTCA
AAAGGTTAAGATCAGAGAACTTAGACATGCATAAGCTTTGGTTTGAGGAACAATTGAGTCAACCATCGTAACAGAGGGC
CTGAAAGTATCTGAAGGTAGAATGAATAGTTTATAGTAAGCCAGTCCACTCTCAGCTCTGAGAACATCCAGCTGCATAA
CCTCAAGGGAACTGCGTGGAAAAAATTAAGGGAAATTCTTTGGGCTTTAGAGCTTTTCATTTCCTATGAACAAGGCATC
TCCTGCCCTTGTCTCACCCATATCTCCATTGTCCTCATGTAGTCTTCTGCTGGTTCACTGTGTGCCTGGCAAGTCAGGT
TCTTACGCGAGGGAAAGAGCTGTTTTAAGTTGTTTATGAATAGAGAAAGCAGATTCAGTCAGACGTAATCTGACTCTGT
ATGCCTGCAGGGGTTGTGGCCTTTGTTAGTTTATTATGCCTGTAATTTGGGAAGTCATGCTGCAGAGATGTAAAGTGGG
ATGGGCCTGAAATAGGTCTTGTAATAAAAAGGCAGTTAGGGAAGCCTGCTGGTGTCCTGCCTGGTTACTACTATCTAAG
TGCAGCAATGTGTTAGTTGATTTTAATAAAGAGTTGAAATCATTGTTAACTGGCCTCCCTCCCACTGAGTGAAGAAGGC
AGATTACACAGGCACACGTTTRCCTCCCCTAGTGTGTACTATGAATGCAGCTGCTTCTGAAGGGCCAGCACGTGGCCTT
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GCAAATGCCAAAAATGTCATCTTTGGCTCAGATGTGCACTGGCCTGTTAGAGACAACTGCCATGCAGAGAAGGAATGTC
ATCAGCTGCTAGGTCTCAAATTATCAGCCTGGATTGACAGCTGCAGGATGTAGTGCCTGCCTATAGTACTGAGGCCATG
ACCCACCTCTGGAGAGACCACAGCCTCATCCCTAGAGTAGAACTGGAAATTCTCCATTGAGACAGGAAGGCAGCACTTG
AACCTGGCAGGTTTTGGAGTGAAGTGTCTAAGGACAGAATTTCTCATTTCTCCACCTCTGCCCATGTGTAAGGCAGCAA
TATTTTCATAGAGGTGAAGAAGGCAGGTGTCCCGTGGTTATTATGACATCTGTTTACCTCATTCTAGTCACTGTGCCAT
GTTTCACAGCCATTGTCAACTACATTTGGTGAAAACTGTTTCCTCCGTCCACAACTGGAACATTGACACTAACCACATT
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TCCATGTAAGCCAAGATAATATTTCCACTTCTCCTTCTGAACATGTGAGTACAGTTTATATATAAATCAACAGCAAGAT
GGAAATTTACTCTGAGCTTTGTGATGTTTTCACTTTAAGATGCTGTAGTTCTGATCCTTTATACATTTATTTCATTTTC
CCCATCTCAACCCCAGTATATAGCAACACTCACCTGCTCTAGAACATGATTATCAACTGTTTCAGCTATCAATGTAACA
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ATAAACATGTAAAGAAATATGTCATTTTTGAAATTTCATGAATCTTATGTCTATACCGATTCCAATTCCAAACTCAGAC
TGGCAATCTGCCTTTATTATTGCAAAGCCCCRTAGCTTGTTATCTTCATGTACCTCTTGATCAAGTATTTAAGTGAAAT
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GGGCTGCATGCGCCATTTGGTGGTTGTAGTTATGCACATGTACTCTTTGGGCAATTTTCCTTTACTGGTCTAGTGCCCC
CAGAGGAAGGTCATATACCAGTCAAACTTTGCCATTTTGCCCCTTACTGTGCATGCCTGCTCAATTCCTAGGGTTTTAT
CGCAAAGTTGTTGCCTACAAGCTTAAGATGTTTCCTGTTAGGAAATTTCCCCCTCCCTGGTGCCAGCCATGACCATCTA
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CCCTGCTCATATCCACCTATCTACCTACCCTAACATATTCCCCCCTCAAGAGTGTGAGACTCAATTATTTGGGGCTAGT
GGATGAAGGTCAGTCCTCTGTGGCTGCTTCCTGCTGAAATAAGGGCTGTATTTGTCCTCTGGGTCTCAATCTCTTGCTA
ATTGTCAGAACAGAATGGTCCCATCGGTAGGTAGAATTGGTGTCCAGCCAGGTCCAGGGGAAACAGGTGTATGTTTTCT
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CACGACCAGGAAAAGTTAGGCATGCAGACACGTGGAAGGGTGAGGGGAATGGAATTTATTATTTATTGGGCGAAAAGGA
AAACAAGAAAAGAAAAACTTTCAGCAAAGTGAGAGGGGTTTCTGCCAGCAGGCTCCCATCTCACAGATTGGATTCCAAG
CCCCCACACACGAGCTAAAGTTCCCAGGCTCTTTCCCCCCAACAAGGCATGAACTTCCTGGTAGCTTTACCCCATCGTC

Fig. 9.273

GCAGTGCACAGGCGGGCGGGAGATTCTCCAGGGATCCTCCCTCTTATCTGCCTCCTGCATCTATCACCTGCATTATTGG
GAACTTGGTTTGAAATTGTTATATCCTGGAGAAGACAAATTTATCTAGTAGGTTAAAAGGCAGGGGCCAAAAAGAAGTA
GACGTATGGAGACAGCTGGTTCGAGCAGGGGAGGAACCATGTGAGCAATGGGAGAGCAGATTTTACAGAGTTCCAGATG
GAATCTGCTGAGGGATTTTCTTTCCCAGAGTCATGAAGCCACTTAGCGTGGTCACAGATTCTCTTTATATGTTCCTCTA
CTTGCCCACTATTGTTGACACAAGTGCAATAGGGTTTATTGATGACAGCACAGACGACTCTGTTCTGCAAGGAGGTAAT
CTAGAGCTAGTCTGTTGTCCATGACTGCATTAGCTACTGAATTCAGTGAAGCCTTGAGTTTAGAGATTCTGTTCCCAGT
TCTCTGACCTAGGTCTCCAATTTGTGTAGAGAGGTTTTGGAGGGTGACTTTATGATAACTGAATCCTCTGTATGGGGCA
GCTAATCCTATGGCAGCCCCTAGCCCTACCATTATAAGGCCAAGAGCTCTCCTTTTTTAAGAATTTGTAATGTTATAGA
TGGTTACACCTGTTCCTTGTGGCCCCAGGAGTCCTAGGGCACATCCCCTGTATGTTGGGTGTTATCTATGCAGATAAAA
AGGTTTACAAGTGAGGGGGTTGAATAAGTTCTTTTAGAACTTCCCTCACAGGGCAGTTTATTTTGTTTAGGTCCATATA
AAAATACATAGCCTGGAGGGGTGTAGGCCCACTCGGGAATGTTGGTTTTGAACCAAGTGTAAGCATAAGCAATCCCACC
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AAGCCTCTCAAGGTTTTATTTAGGAATGATGTATCCAACTAGAGGTGCCAGGAACTTTGATAGCTGTTGCAGTGGAAAG
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CAAGCTTTATGGAGGGGGAGCAGATGAGTAAGCCATCTACATACAGCAGAAGTTGTCCCCACTCAAGATATAGCTTGGT
TAGATTTCTTTGCTGGGTCTTGTCCAAATAAGTGTGGGGCATCTCTAAAACCCTGAGGTAGGACTGCTGGCTTTCCTGG
GAGAAACTGGGATATTAGGGGGAAATATCAGTCCAGATGTTGGGTAAATATTAAGTGGATACCCATTTTGGAAAGTATA
TTCCTACTCAAAAGCAGTGTGAGGCATTTAGACATTGCCAGGGACTAGTGGGAGAATAGTAATTAGTCCCATAAGCAAT
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GCCTAGAGAAAAAGGTTAGCACAAAGTAGGCAGTTCTTGTATTTAAAAGGATATTTATAGCACTACCTGTCATTTCCAG
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CTTATCACAAAGAGGGCAGGCTGTGTGGGGCTTCCTCCCATTTGGCCCATTTGGAAAATTCCTTCTCCAGTAGCCTGGT
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CTACAAGCTTGGAGAGGAGAACTAAGGAGCCCGGTGTAAAGTGGGGCCAATTCCAAAGGTCTGGGAGTGGGATAAATAG
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TCTGGCTTTTTGCCCTGATAATGGCAGAAAAGGTCTAGCCGGAGAATGGTATTAAAATTTGTACTTCCATTCTCTAGCC
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GTTGCTCAGCTGGAGTGCAGTGGTGCAATCTCAGCTCATTGCAACCTCTACTTCCTGGGTTCAAGTGATGCTTGTGCCT
CAGCCTTCCGAGGAGCTGGGACTACAGATGCATACCACCAAGCCCAGCTAATTTTTGTATTTTTAGTAGAGACGGGGTT
TTGTCCTGAACTCAGGTGATCCACCCGCCTTGGCCTCATAAAGTGCTGGAATTATAAGCATGAGCCACCACGCCCAGCT
GAAAGCATTCCTTCCTGATCCCCTTATACCTTGGATCAGAGTAGTGAGTAGGGCATCCCCCATTCATCCTGGAGTTCTG
GAATAAACCAGTGATTACCAGGTACCACTAACCCTGGTCCCACATTTCCCTCCAGGACCAGCCTTCATCTCTCTGCTAA
TGGTAATCTGTCCTGCACCTGTGGCCTCTGGCTGACCTGTACCTTTGACACTGTGATCTTACAGTGACCTTTGTTTGGA
GCATTCCAGCAATGAAATGGTTTTCCTTTCTCTCAAATTCCCATTCTCCATATCCCTTTAGGTAGGTGAGGATCTTATC
CCTAGCCAGCAGCTGTAAGGGAACTGGGCCTTCCTTTCTCTGGACATAGCACTGTAGGTCCCAGTATATGTTAAGAATG
TAGATGGTCAGAGGAACAGAGGAAAACCTGCATCTGAGTCCCCTTGTCATCCCTCCTGTGGATTCCTGGGGAAGCATGG
AAAACAAGTATTTAAAATGACAGGACAATCCATCTGCCACCCGTGGGAATGGTAGAAAATAAGGGATATTCATGGAAGG
CTGCTTTTGTACAGTCTCACAAACAGCAGCCCTTAGACCTAAGAGGACATTGCCTATCAGTCTTCTCAGTGTAGAGGAA
GAACTGTCAGGGCCAGGGAGTTTGGGATGAGAGACCACAAAAGGCAGAGAAAGAATTGTCCTCTCCCCAAAGTGCAGAT
AGCTCTAGAAAGGAAGTAGGAGTTGCTCTTAATGGACCACATACAGATGCCCTATGGAGACAAACAAATGACCTCAAGA
GCCACTGGAAAACCTGGTCTCAATGTGTAGCAGGATTTAAAAATTCATGATAGGAAATAAAGAATTGGTGGAGACAGAG
TCTTCCCAATATTAAGCAGAGAAAGAAGTTGCATGATATGCAGAATAGAAGCAGGGAAGAGGTTGACTTGCCCCCAAGA
CAGACAGTGTGGCCAGCATATAAGGCCATCTCAAAGTCCACAGAAAAAAAGGAAGCATAATAGGGTGTAGACTTATTGG
GGAAAAGTCCACTTTGGTTAAGGAAATGAAGGTCTCCAGTCTTTGAATGGCCTAGGCTCAAGCCCTATCACCCTTGTGA

Fig. 9.274

GCCACCTGTCCAAAAGGGCCACAGTGACTTAGGTCTACTCAGTACAGACTCTGAAGTCCTCCACCTCTGCTGTCGCCCA
CCAGGATGAACTGAGGAATCTGCTAGAGGGAAGAGTGACCAAAGAGAATTTTTCTGGAGATGGGCTGGTGAGTGAGACA
GCAAGAGAAAGAAGACCTCACGTAAGCAGAGTTGGGTGCCTCCAGCCAAAGATGGCAAGGCACAGAGGGTCTTACCGAG
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TCTGAGAAGAAAAAATACATCCAAGAGACAGAAGTAGATTTAAGATGGCAGACAGGAGGCAGGACTAGATTGCAGCTCT
GGACAGAGCAGCATGTGGAGGCTCGCATTGTGAATTATAGCTCCAGATTGACTGCAAGAACAAACCAGCAACCTTGAGA
GGACCCACACACCCTCTGAAGGAAGCAGACTGCTCTTGCAGGACCTGGGAAACACCCCAAATACTGTGAGTACCCCAAC
TGTGGAAGTGGGAAAGGGAGACCCTCCTCTCCTGAACACACACCCCCACTGGAGAAGCTGAAGGTCTGTTTGCAAGAGA
AGTTTCTGACTTTACCTGGAGCTGAGTCAATGTGGAGAGCTGAGTGAAATACAGAGGCAAAGAAAGTAGCAGAAAGGCC
CTGGAAGCTCTCTGAGTCCCCTAGCAGGCCATCCATGCCTGGCATCACAGGGATCCATCCAGAGGGCAGCCAGAGCCAG
AGGTGCAAGGGGTAAAACTCTACAGGGAGAAGAAAATCTCTAGCTGAAGTTTGTAACAATTTGAATGGGGTGAGAAGCC
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CAGCTGGGAGGTGGGTAGCCTGGGGCAGATTTTCAAGCTCATCTTGCCCTCCAACTGAAAATGGACTCAGGCTGTTAGA
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TTACTGTAGCCTTGTAGTATAGTTTGAAGTCAGGTAGCGTGATGCCTCCAGCTTTGTTCTTTTGGCTTAGGTTTGACTT
GGTGATGCAGGCTCTTTTTTGGTTCCATATGAACTTTAAAGTAGTTTTTTCCAATTCTGTGAAGAAAGTCATGGGTAGC
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CTTCATGTTGCTTGTAAGTTGGATTCATAGGTATTTTATTCTCTTTGAAGCAATTGTGAATGGGAGTTTACTGATGATT
TGGCTCTCTGTTTGTCTGTTATTGGTGTATAAGAATGCTTGTGATTTTTGCACAGAACCTCTTTAAAGCGTAAATCACA
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TGAATGCAATGGTACCTCACATTTCGATACTGACATTGAATGTAAATGGCCTAAATGCTCCACTTAAAAGATGCAGAAC
TGCAGAATGGATAAGAACTCACCAACCAACTATCTGCTGCCTTCAGGAGACTCACCTAACACATAAGGACCAACATAAA
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CAAAACAAACTTTAAAGCAATAGCAGTTAAAAGAGACAAAGAGGGATATTATATAATGGTAAAAGGCCTTCTCCAACAG
GAATATGTCACAATGCTAAACATATATTCACTTAACAATGGAGCCCCCAAATTTATAAAACAATTACTAACAGACCTAA
GAAATGAGATAGACAGCAACACAACAATAGTGGGGGACTTCAGTACTTCACTGACAGCACTAGACAGGTCATCAAGACA
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AAATATACATTCTATTCAACAGTGCATGGAACTTTCTCCAAGATAGACCATATGATAGGCCATAAAATGAGCCTTAGTG
AATTTAAGAAAATTGAATTATATCAAGCACTCTGTCAGACCACAGTGGAATAAAACTGGAAATCAACTCCAAATGGAAT
CTTCAAAACCATGCAAATACATGGAAATTAAATAACCTGCTCCTGAATGAGCATTGTGTCAAAAATGAAATCAAGATGG
AAATTATACAATTATTTGAACTGAACAACAATAATGACACAACTTATCAAAACCTCTGGGATACAGCAAAGGTGGTGCT
AAGAGGAAAGTTCATAGCCCTAAATGCCTACATCAAAAAGACTGAAAGAGCAAAAAAGACAATCTACAGTCACACCTCA
GGGATCTAGAAACAAGAACAAACCAAACCCAAACCCAGCAGAAGAAAGGAAATAATCAAGATCAGAGCAGAACTAAATG
AAATTGAAACAAAAAAAAACCATACAAAAAAATAAATAAATAAATGAAACAAAACCTGGTTCTTTGAGAAAATAAATAA

Fig. 9.275

AATTGATAGACCATTAGCAAGATTAACCAAGAAAAGAAGAGAGAAAATCCAAATAACTTCACTAAGAAATGAAACAGGA
GATATTACAACTGACACCACTGAAATACAAAAGATATTCAAGGCTACTATGAACACCTTTATGCACATAAACTAGAAAA
CCTAGAAGAGATGGATAAATTCCTGGAAAAATACAACACTCCTAGCTTAAATCAGGAAGAATTAGATACACTGAACAGA
TCAATAACAAGCAGAGAGATTGAAATGGTACTTAAAAAATTATCAACAAAAAGAAGTCCAAGACCCGACAGATTCACAG
CAGCATTCTACCAGACATTCAAAGAATTGGTACCAATCCTTTTGACACTATTCCACAAGATAGAGAAAGAAGGAACCTT
CCCTAATTCGTTCTATGAAGCCAGCATCACCCTAGTACCAAAACCAGGAAAGGACATAACCAAAAAAGAAAACTACAGA
TCAATATCCTTGATAAACATAGATGGTAAAATCCTTAACAAAATACTAGCTGACTGAATCCAACAACATATCAAAAAGA
TAATCCACCATGATCAAGTGGGTTTCATACCAGGGGTGCAGAGATGGTTTAATGTACACAAGTCAATAAATGTGATACA
CCACATAAACAGAATTAAAAACAAAAATTCCATGATCATCTCAATAGATGCAGAAAAAGCATTCAACAAAATCCAGCAT
CCCTTTATGATTAAAGCTCTCAGCAAAATCAGCATACAAGGGACATACATTAATGTAATAAAAACTATCTATGACAAAC
CCACAGCCAACGTAATACTGAATGGGGAAAAGTTGAAAGAATTCCCTCTGAGAACTGGAACAAGACAATGATGCCCACT
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AATACTTAAGAATATACCTAACAAAGGAGTCGAGAGACTTCTACAAGGAAAACTACAAAACACTGCTGAAAGGAATCAT
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ACCTGATTTCAAATTATACTATAAGGCCATAGTCACCAAAATGGCATGGTACTGGTATAAAAATAGACATATAGACCAA
TGGAACAGAATAGAGAACCCGGAGATAAACCCAAATACTTACAGCCAACTGATCTTCAACAAAGCAAACAAAAACATAA
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AAGATAACTTTGGAAAAACCCTTCTAGACATTGGCTTAGGCAAGGATTTCATGACCAAGAACCCAAAAGCAAATGCAAT
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CAGACAACCCACAGAGTGGGAGAAAAATCTTCACAATCTATACCTCTGACAAAGGGTAGTATCCAGAATCTACAAGGAC
CCCAAACAAATCAGTAAGAAAAAAACAAACAATCCCATCAAAAAGTAGGCTAAGGGCATGAGTAGGCAATTCACAAAAG
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CTTAAAGAACTAAAAGTAGAACTACCACTTGATCCAGCAGTCCCACTACTAGGTATCTACCCAGAGGAAAAGAAGTCAT
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TCCATCAGTCAATAAGTGGATAAAGAAACTGTGGTGTACAGATATATATACAATGAAATACTACACAGCTATGAAAAGG
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GCAAACATCATATGTTCTCACTGATATGTGGGATCTAAGCTATGAGGACACAAAGATATAAGAATGATACAATGGACTT
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TCTTCCTGATCTCCTCCCCTCATCCTTCTTGGGGGAACTGTTGGCTAATCCTTGCATGCGCAGTAACTTGCTAATATCT
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CCCCCAAAGGAAGGTCACATATCAGGCAAACTCTGACGTTTTGCCCCTTCTTGAGCATGCCTGGACATATCCCCGAAGG
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GCTATAATAAGTGTAGATTCAAGAGCCATTTGGACATATCTGGCTTTTAAATAGTGTTGACTAATGACCAACTTAACTT
AGATCTTTGAATCTATGTGTGGTGTTATGATATATATTAGTTTTCATCTGAGGTCTAGCTCATAACTCCCACAGCCCTT
GTTACAGTCTTTTGTTATAATGTTGGGTGTGTTAGGCCTCAGGGGCAGGCCCCTGACCTTCTCCTTCTCTCCTTTCACC
TGTTCCTGCCTTTCTGATTGTGGCTTTTAAGACCTTCCCCAGAGAGAGTACTGCCCTATACCCTGGGGGAAGGAATGCT
GATGTCATGAAGCCTCCATAAAATCCCAGAAGGACAGGGTTCAGTGAGCTTCCACATAGCTGAACACTTGGACTTTCAT
GGAGGTTGGCACAGCCAGGTAAGGCATGGAAGCTCCACACCCCTTCCCCCATACCTCACCCTATATGCATCTCTTAATC
GGTAACATTTGCAATATCCTTTATAATAAACTAGCAAACATAAGTAAGTGTTCCCCTGGGTTCTGTGAGCCACTCCAGC
AAATTAATTGAACCCAAAGAGAGGATTATGAGTATGCCAACTTGGAGGTGGCCGGTTAGAAGCTCCAGAGGCCCACACT
TGTGACTGGTGTGGTGGGGGGCAGTCTTGGGAACTGAACCTTCAACCGGTGGGATCTGACATTATCTCCAGGTAGACAG
CGTTGGAACTGAATTACAGGACACCCAGCTAGTGTTGGCTGCTTGGTGTGGGGGGGAAACCTCACATGTTTGTTCGTAG
AAGGCTTCATCTGTGTTGATGATTTTTGTGGTGTGAGAGTAGAGGAAAAATGCCATCAGGGAGAGTTTTCTCTACACCC
TATAGCTCCTAGATGCTTTTTATTTAAGACATTCAAACCTTGTGAAAAACAAACAAACACAAAAATCTTTTTATTTAAG

Fig. 9.276

ACGGTCAAACCTTGTTCAAAACAGCACAGACATTAACTCGGAATTTAGGATTTATTATTGATTAATTGACATTATCTTC
AGTCTGTTCATATTATTAAGTGATATAAGTCAGGTACACACACACATGTATGGGGAGTGTGTGGGAGTGTCTGCATGAA
GTATACTGTCAGAAAATATACTCATTTCAAAGAAACACTGATTTAGGCCCTGGCAAATAAGGAAACATTTCTATTTCTT
CTAGAAATAACACATTCATTTGCCAACATCTGATCTATCCATATGACCTCTTAATACACACATGAAATAATAAAGTGTA
TTTTTCATTCATTTAATAAGCATGTGATTCACGTGACACTGTAAGCCTTTTTTTTTTTTTTTTTTTTTTTTTTTGAGACA
GACCCTTTTTCTGTCGCCCAGGCTGGAGTGCAGTGGTGTGATCTCTGCTCACTGCAACCTCCACCTCCTGAGTTCAAGC
GATTCTCCTGCCTCAGCCTCCCAAGTAGCCGGGACTACAGGCACGGGACACCACGCCTGGCTAATTTTTTTGTATTTTT
TGTAGAGACAGGGTTTCGCCATGTTGGCCAGACTGGTCTGAAACTCCTGACCTCAGGTGATCTGCCCACCTCGGCCTCC
CAAAGTGCTGGGATTAAAGGCGTGAGCCACTGCGCCTGGGCGAGCATTTTTTTTATTCCAGTGTTTCTCGTTAATCTA
CCCCATGGCGTTTTATTTCAGGTTGTATGTATGCCAGAGATGAAAAAAGGCAAATGACAGAAGAGCAAGTATATGGAGA
AAGATAGGAGGGACTTGAGAAAACTTGGCAATTTACTAAAATGAAATGGCATTGTTTCCATATTTACCAAAAACAGACA
AACAAACCTAATCATTCCTCTCATTTTGATCAGCTTTCATGTATATTTTCTAGGCCTAATCAAAATCTTCTTTGGTGTC
ACAAAATAATGGAAGAGACATGTATTGGTTTAGGCTCCTGCAGCAGTAGACCCCAATATAAGGAATATTAGTTGTTTAT
TTAGGAAATTCAAGAAACCTAAGTAAAGGAGTAGGGAAGTGAGACAGGAAATGGAAGGATCTCTGAAAAAATACACATC
ATCAAGTCCGTTCCCACAGAGGGAAACAGGAGCTCAGTCCCCATTGTTGGGTTCTGGAAGACAGTGTGGAACAGACCCC
AGAGTTATCCCAACTGTGAGATGAGGAAGCTGGGGTGCTTTTCACCAACTCTTCATCCATCACCTGCTTCCGGGGGTCA
TTAACAATCCACCACTCCCAGGTTATTTATGCTCAGGCCAGGCATGTAACTGCAGCCAGAAAATAGCCCTTGCCAAGAC
TCACAGGAATTAAAAACCTTCAGGCAAGGAGCTACTGGTCTTTGTAATAATAAGCTTTGAGAGGCGGGTATTCAGAGGC
TATGGGCACCAATAACTTCCCTTATGTGAGTCATAAACACAAAGTTAATTTTGTTTGCATGTGTATACAAGTATTTTGA
ATGAATGCTTCTCTTTGTTTTGTGTGTTTGGAAAATTTAAACAAAATTATTATTGTTTTTGTATTGGTATTTAAACATC
TGAATATGTAACATCAAAGATGATATTAAAAAGTATAAAGCAAATTATCACAAAATCAGATGTGCAGTTACATGTTTAC
TTGAAATTCTCTCTAGACTACATTTGAAATAGGAGCTTCCATAGGGGGAAATTTAAATTTTTTTTACAAGTTGTTTAAT
TATAATGTGCTTTAAAAACACTTTAGCATATCATAAACCTTCAAAACAAAATGAGTAATCATCTTCTGAGATCCATAGA
AAATGTTTCTTAAATGTCACTTTCAATTACCACTTCTGGAGCTAACTTGCAAAACAATTGTGTTTCCACCAACTGAAAT
ATGTTTTCACCAAATTTAAGATAATCTGTGGTCAGTGTGAGCTTTGTCTTGATTTAGGAGGAGGAAAGCAAAGTTCCAT
TTATGAATACTTTGAAAATTTTCAGAAATTCTCCTAAATTGTTTCAGCAACCAGGCCAAAAGAGAGGCCTGGAATCCCA
AGGTGAGAGGAAACTTTAAAAGTTACACTTATGGCCAGGCACGGTGGCTCACACCGTAATTCCAGCACTTTGGGAGACT
GAAATGGGTGGATCACTTGAGGCCAGGAGTTCAGGACCAGCCTGGTCAACATGGTGAAACCCCATCTCTACTAAAAATA
CAAAAATTAGCCTGGTGTGGTGGTGCATACCTGTAATCCCAGCCACTTGGCAGGCTGAGACATGAGAATCACTTGCACC
CAGGAGACAGAGGCTGCAGTGAGTGAGATCATCCCACTGCACTCCAACCTAGACAACAGAGTGACACTCTGTCTCAAAA
AAAAAAAAAAAAAAAAAGTTTCACTTGTGCCTTGGGGTTGGCTGCCTGCTATCATATTTTTGTTGTGTTCTTCTACCCC
AAGCTCCAGTACCTCCCCTCACAGAAATCACCTCTCCTACCAACCCCAAGGGAACCCATTCCATTTTTATTAGAGAGTT
CTTCTTTACATGGCCTCAAGTCTTTTCATCAAGATTTACTGATAGAATAACAGTAAATCCACATTACTCCAGGTGTCTC
TTTGCCCTTACCTAGCCTTTGTGTCTATGCCATTCTTCTCAAGGAAATTGCCTTCCTTTATCAGCTTTAAAAGTCCATA
TTTGGGATCCCCTCTCCTGGAAACATTCTCTGACTATCCAGCCCAGATAATTTTTTTTCTCTGCTTTCTCATTATAACA
TTCATGATCTGTGTCATTCATTCATTCATTCATTTGCCCAATATTTCTTGAGTGCTTCCTAAGTTCAGGCACTGTTCTA
GGTACTGGGGACATAGGAGGATAGAAGCCAGTCAAATTTTGCACTCACTGAAACTTTACTTTAGTAGGTAAGAATCTAT
AGTTTAAAAAAAAATTCACATATGAGGCCTGTGAAGCAAATAAAGCAATAATGTGGTGGTTTTCATGGACATTATGTCT
TTCACTACCCGTCCCTCTTTTTGTTGTAAACTCTCTAAGGCAAGTATAACCTCATCTATACATTAGTATTTATTTACCA
CAAGGACCCATAAGTATTTATTGATATATCTTCCTAAGTATGTGATAATATTCTAAATAGATAGTAGATTTAATCATTG
GGATTTATGTGAAGTTGGATTAAATAGATAACATGATAATTACATTTAGTATTGCATGGAAGGACACATTTTCTCACTT
ATAGAAGCCTAAACAAATGTCACAATGTTGATAGATTCCTTTATAGGATGTTAACTCTGAAGCTGTCGTGAAAATGTGT
GAACTAGTTTCACTTTCAACTTGATCCTTTTGGAATCATGACAGATTTTGCTAGCCCTTAATTCTTCTGCAATCTTTGT
TGATCCCTCCTATTTCAATCTCATAAGACACTTATCTCTCCTCCAGAAAGATCTGAAGGGTTAAGTCACCTATTTATAC
CTAATTACAGTGAGCCCTGTGTTGGATTTTTAAGGGATAAAAGGAAGTATCAGATCTCAGTTAACTTATGTACTGTCTA
CAGTGCCTAACAATGACACAGGATGACTCAGTTAAGGAGAAAAATACTCCATTTATCAGCACAGAATTCTTCCCTTTAA
GCTATCATATGGTAGCTAACCTTGCCTAACCTTGCGAGTTTAACCTTGCTTTTTACGTGCATGCACGCGTGTGTGTGTG
TGTGTGTGTGTGTGTTACTAATTTCTAACTGTACCAGCTCCTGAATTAATATTTGGCAACATCAATATTCCTTGTATAA
TGAAGAAGCATGGTCCAAGAGACTTGGATGTGACCTCTCTAAACATCAACTTACAGCTGCAAAATAAGGAATAAGTTGT
AATTATTCCTTATTTGTAACAACTACCTTACAGTGTTGTTTTGAAGATTAGAAGAGAATATATAGATGAAGTACCCAGT
GGACAGTAGGTATTGAATAAATGTTAGTTTCCTTCCACCTTCTCTGGCTTATGTAACAAAATTACTCATTCTACTAGTC
ACTCAGACTTTAGTTAATCATTAGCTAAAGAGTAACAATGCAGGATTTTTTTTTAATAAATTGGCTAGGATTGGTTTT
ATGCCTGGATGGAATAGGCACTTGCCATTTCATCACAATTCAAAATTCCTCCTGAAGGCCTGAAGGCCTGAAATGTTTA
CCATTGGAAACTAATCCCACTGTATGGTTACTATTATTTATTATATCTATTAACTTATAAAATATTAAAATATAAAGTA
AATATTACCCTACTGATGCATTAGCCACTCAACATAAATGAGTTTCTTGGAGATTAATAAAGCAGTACATCAGTATGTC
CCAAACAATGGCTAAAAGGAAACCTAGTAACCACCCCGACCCCAAACTTGTTTTGTTAGGCCAGTCAGATTTTTTTTT
TCATTTTGAATTAGCATCACGATTGAAAGTGGAAAGATCTCACATATAACTTCACATTTCTCTGTACAATTGAGAAACG
TTGGCTATGTTGGCTCTCTGAATAGCAGCTACCTCCTTTCAAGGTTTGTATTTACAATATTTCCCACCCCCATGAGTCC
TTATTATCCTGACACTGAGGACAAATATGAGTTGCTGTCCATCAGCATTCCAAAGCTGTTTTTTTTTTTGTTTTTTTT
TCTTACACTTAGCCTACTTCACTCCCTAACACCACCAGCCTGATTTCTGAGGGGGCCTGAGGTAGGAGGAGGAGAATGG
AGAGCACTTTCTCTGAGAGCCGCCATTTTAACAGATCATTAAAGACACGATATTCACATGACGGTTGCTTACTCTCTGA

Fig. 9.277

TGAAAACTACAAAAACAGAATACACAGGGAAGGTAATCTGAAGGTGATACCTTTTTCCTATGATCCTTGGCCTTATAAC
CACTAATCAAGCCTGAGGGCCGAAGTTCCTGCCTCATCTCTGCCTGATGTTACGAACTAGGCAGGCTAGCAGAGGCAAC
AGGCAACCTGGGCACCTGAAGAGCTACCTGGATAACCTAGAAGAACAGTAGGAGGTTAAAGATGAGGACAAGTCTATCA
AAACAAAAGCCTGTCAAGACCAGAAAGAGAAAGTCACACTTTTGACTTTACAGTTTGTGCTGGGCTGACACAAAGGCCT
CAGTTAACACCAAATACAACTTCCATAGACTTCAAGTTTCCCTCATATTTTTCCTGGGTCACTATTCCAGAGTTGAGAA
ACTGAACTACATCTAATATTTTATTAAAATAAAATTGAAGATTATTAGAAAAGTTTATTAGTCAATAGTAAAACGTTAT
TTGGTTAGCTTTCTTAAACAATGGCATTTATAGATATCTGATTATCCCAACAAAAATCTTCAAATGGTTCATGGACGCT
TTGTCAAGCTTTTGTGCCACCTGAGAGAAAAAAAGATAAATGGGGAGGTATAATGTTAATTTTGTAGCCTTTGCTTAAT
GTTTATTTTTGAAATGCCTATCATTTTCTATCAGTATCTGAAACTCCATGGATTTCTATTAGCCTTCACCAATAATTAC
ATTTGAAAGCATCCAGAAGAGACAATCCTTACCACAGTCTCTTTTAAACTCTTAATGGCTGTCACAAAATTCTATTTTT
CATTTTCTCTAAGAGCATTCTATTAAACTGTTCCTAGTTATTAGCTTTCATAAAGGCACACAGAAAATGTTTCCTCTAC
AGCCACAAATATTCCTAAAGCAGAATCATAGTAAAACAGCTGTGATAATGTTTTATTCATTCCAGAATCCTAATGATTG
AACAAAAGAGAGACAGTCTTAAGAGTTAACATCTATTGAGTCCGTGACTGCGTGCATTGTTCTTTCAAGTATTTTACCT
GCACTATTTAATGTAATTCTCCCAGCCACTCTGATTTCACTCATTTTACAATTGAGGAGACTGAGGCATAGAAAACTAA
AGCAATTTGGCTGGAGTAAGGGCCAGGTTGGGACTTATACCTTGGCGGTCTGCCTACAAGGTGTTCCTCACCACCATCT
GACACTGCTTTCTCTGTGTAGCCCAGAGTGTCAGCCTCAGTGCTTCAACTTGAGCTTTCAGGATCTATTTAAAGATGGA
AAATATAGTTACATTATGTCACCATTTGAGATGCAGAAAGACAGGGCCACCATTTTGCACAATTCTGAAAGCACAATTC
ATGCTGTGGTTTGTAAAAATGGTACTCCCTAGAGTTGGGCAATGGACAGCTCACACAGAGATGCAGTGGCCCTGCTAAA
CTAATGCCTTACATAAAAGAGTTTTACTCTTCATTCCCTTAAATGATTCTTAGTAACACTGGCTGACACACACACAAAA
CAGTTTCTAAGTAGGTCTGTCCGCATACTATGATCACTGGTCAACATTAAGTTTCCACAATTAATTTTACATAATCCAA
AGACTGCCAAGCAGTTTATCTGGGTAAACTAAACATTCTGTAGTCATTTATTCTGCTTCCAGTCATGCCCAGCAACAGG
TTGAGAAGACAAATGTTCTCAGAAATGATCTCCAAGGAGTTGGGAGCAGGCTGCTTATACGTCTAATTCACCAGAATAG
GTGAGCGTGGTCGTGGTGACCTTTTCATACTGTTGCAGAGCTGAGTATGAAGAGATGACTCACAGTCCTCCAATGCAAC
ACAGGTGACCCTGCAGCCAGATTTTGCCTTCAGTGGTATGTGACTCCCATGGGGTCAGGAGAGTATCTCAGACATTGAA
ATTTGACCTAATGGCCTACCTACCTGCACACGCACCCCTGCCCACTTACAGAAGGGCAAGAACTCTGCATTACTGAGGCC
TTGTTATTATTATAGTTCCTATTTAGGTAAGAACGCAATGGAGAAAAAAATGCATTTGGTTATTGGGCCTCTGTTTGAAT
ATCCTGTGCTTTTTGCCAAACAATGCATTCTACATAATCTTAAAAAACAAAGTCCATTTCAAAGAACAAAAAATAATGAC
CATATCCACTGAGCAATTGAGCAGAATGGGAATCGGAGTTTTAAACTCTGATATATCTGTTTTCCTTAGGGCTGAAATC
TTCTTTTCATGGTTCTAGTTTCTCTAATTGAAATAAGAACCTAACCCTGTTCAAAACTACATCTCTGGGAATGAGTGAA
AAATTAATGATCCTCCTATTTTGTTGGATCATAATAATGACTCTCATCCTGGTGGGGCCACCAGCAATGCTATTCTTCT
CAGACTCTATCTTAGTTCCTAAGCCACTCACCAGGTATTTAAAAGAATGATTTAACACAACTAGAATCATTTAAATAAC
TGTATTTTTTAAGAAAGCCATATTATTGCTTTAGTTTGGTCATTCATATATCCAAACCTTGGACTCATCATCTTGCAAT
CTCATGTGTTCAGTTATTCCAGAGAAAACATTAAGGAGAATTGTATTCTTCTTCCCAGCTAAATTTTAGGTCCTCAAAG
CTGGCAACCACAATTTATGCTTTCTAAAAATCATCTATGATACTAAGTATGAGCTGGATCATGAATAAAACCCTTGTAA
CAATAAATGCTTGATGACTTACTTCATCTCATTAGCAAGGGAAGGTAACTCATAATTATCAAGGTACTACAGGAAATAG
GGCACTATCTGGAAATGCTAAATACATCTCCTTGCATGAATCACTTCTTACCAGAATTCCCTTTCTTTCCAGATCCCAC
CTCCAGGGTTCTGTGGTCCATACCAGGCACTACATTCCTCAGGGGCTACAGCCTATGAGCGTCTCATGGGGCTATGAAA
CCATTTGAGACCTGGAAAATGAAGTAATTGAATACAAACAGAAAACTGCAAAATGAGGACTAACATTTAATTAAATGTT
CAAAGCATAAGATTATGTCGACTTCAATAATTGTCAAATGAGTATTCTTAACATTTTACTAAATTAAAAAAACTTATGT
GCTGAGTTTTTATTTTACAAGTATCTCCAAGTATGCTGGATGATTGCAAAGAAAATCAAGGCCAGTCATTGGTTAAAT
GAGTTTAATAGTAGCCACATAATTTCAAAAGCAAAATTATAAAGACCCTTCCCAGACTGTTGATAGCAAAAATAATCTA
CGTTGTGGAAAGTGGGTCCATGTTAATATGTTAGATATAAGTAGTGAGGCCTAAAAAGGTATTAAAACATCTTTGCTTA
AGGTACTACCTATTTGCAAGATTGTTATTTTAAAAATAGCTTATGTTTTAAATTGTTATTGCTTTTTATCACTCTAATA
AGAATTTATAGTTGCTGTAAGATAACAAGAAAAAGGTTAACTATCTGCAGAGATGCCTGAGAGTCAGCCAGGGAGTAAC
TTAAATCCTGCAGGAATCTGACTCACTGAAGACTGTCAACTGAATGAAGGCTTAAATTTCATGGTCTTGGGTGGAGAA
CTTTTTCATATTCTTTCCCCATATGGAATAACAATCTGCCCTGAAAACAGGGAGTATTTTGGCATGATCTCTTTTTGCT
TATTTGCCTTCCATTTTCCATAAAGCAACTTTTGCCAAGCACCATACTTAAGACTCAACTTTTTTGCAAAAATATCAGA
CAAAGCACTGTCTTTAAGAACACAGAGAACACACTAGATCCCTTCTTCTGAAAATCACTGTTCTATGTTGTTTGTGGAT
ATTTTTTTAGCATTCACTGCATGCCTGGAATGAATAGGCTGTGTTTCTCCCCAAAAGAGCACAAATTAATATACAAGGT
CAGGTTAAATAGTTAAGTCTGCTTTCCTATCCCTTATACAGAAGCTATCCATTCAAAAAAAAAAAAAAAAAACTTCTTT
TTACTTTTTTTAATTTTTAATTTTGGTGCATACATAGTAGGTGTATATATTTGTGGAATACATACAAACATACAATGCA
TAATAATCACATCATGGTAAATGGGTATGCATCACCTCAAGCATTTATCCTTTTTTTATGTTACAAACAATCCAATTTT
ACCCTATAATTGCTTAAAAAACATACAATAAATTGTTAACTATAGTCACCCTGTTGTACTATCAAATATTAGCTCTTAT
TGATTCTATCTAATTACATTTTTTTATACCCGCTAAGTATCCCACCCTTCCCTCCACGCTACCCTACCTAACCTCCGGA
AACTGTCTTCTGCTCTCTATCTCCTTCGTTTGTTTTAATTTTTAGCTCCCACAAAAAGGGAGAACATGTGAAGTTTGTG
TTTCTGTGAGTAACTTATTTCACCTAACATAATTATCTCCACTTCCATCCGTATTGTTGCAGATGACAGGACCTCATTC
TTTTTTATGGCTAAATAGTACTACATTATATATATGCACCATATTTCTTTATCTATTTGCCTGTTGATAGAAATTTAG
ATTGCTTCCAAATCCTGGCTATTGTTAATAGTGCTGCAATAAACATGGGAGTATAGATAACTCTTTGATATTTTGACTT
TCTTTCTTTTGGGTATGTACTTAGCAGTGGGATTGCTAGATCATATGGTAGCTCTATTTTTAGTCTTTTGAGGAGTCTT
CAAACTGTTCTCCATAGTGGTTGTACTAATTTACATTCCCATCAAAAGTGTACCAGGGTTCCCTTTTCTTTACATCCTC
ACCAGCATTTCTTATTATTTGTCTTTTGCATAAAAGCCATTTTAGCTGGAGTGAGATGACATCTCACAATAGTTTTGAT

Fig. 9.278

TTGCATTTCTCTGACGATCAATGATGTTGAGCACCTTTTCATATACTTGTTTACCATTTTTATGTCTTCTTTTGAGAAA
TGTGTGTTCAGATGTTTTGCCTATTTTTAAATCAGATTAATTTTTTCCTGTAGAGTTGTTTGAGCTTCTTATATATTCT
GATTATTAATCCCTTGTCAGATGGATAGTTTGCAAATATTTCCTCCCATTATGTGGGTTGTCTCTTCACTTTGTCAATT
GTTCCTTTGCTGTGCAGAAGCTTTTTAATTTGATGTGATCCTATTTGTCCCATTTGTCCATTTTTGCTTTGGTTGCCTA
TGCTTGTAGGGTATTACTTAAGAAATTGTTACCCAGTCCAATGTTCTAGAGACTTTCTTCAATGTTTTCTTTTAGTAGT
TTCATAGTTCAGAGTCTTAGACTTAAGTCTTTCATCCATTTTGACTTGATTTTTGTATATGGCAAAAGATAGAAGTCTA
GTTTCCTTCTTCTGCATGTGGATATCCAGTTTTCCCAGCACCATTTATTAAGGAGACTGTCTTTTCCCAAAGTATATAC
TTGGCGCCTTTGTTGAAAATGAGTTCGCTGTAGATGTATGGATTCATTTCTGGGTTCAAAACTGGTATTCCAGTTTTGT
TCTTTTTGCTCGGGATACCTTTGGCTATTTTGAGTCTTTTATAGTTTCATATAAATTTTAGGATTTTTTTCTATTTCT
GGGAAGAATGTCCTTGGTATTTTTATAGGGACTACATTGAATCTGTAGATTGCTTTGGGTAGTATGAACGTTTTAACAA
TATTGATCCTTCCAATTCATGAATGTGGAATATCTTTCCATTTTTTTGTGTTCTCTTTTTTTCCATTAGTATTTGATAG
TTGATAGATCATTGTAGACTTTTTTGGTTTAGTTAACCCTAGGTACTTAATTTTATTTGTACCTATTGCAAATGGGATT
ACTTTCTCCATTTCTTTTTCAGATTGTTCACTGTTGGCATGTAGAAATGCTACTAATTTTTGTATGTTTGTTTTGTATC
CTACAACTTTGCTGAATTTATTTATCAGTTCTAATAGTGTTTTGGTGGAATCTTCAGGTTTTTCCAAATTTAAGATCAT
ATTTCTGCAAATGGGATAATTTGCCTTCTTCCTTTCAAATTTCTTTCTTTGGTCTGATTGTTCTAGCAAGGACTTCCA
GTATTATTAATATATTGAATACTAGTGGTGAAAGTGGGCATCCTTATCTTGTCCCACCTCTTGGAAGAAGAGTCTTCAG
TTATACCCTATTCAGTATGATACCAGCTGTGAGTCTGTTATATATGACTTTTATTGTGTTGAGGTATTTCCTTTTATAC
CCGATTTTTTGAGGATTTTTATCATGAAGGGATGTTGAATTTTATCAAATGCTTATTCAGCATCTGTTGAAATGGTCAT
ATGGTTTTTGTCCTTCCTGTCTTCCTTTTAGTAAAAGTGATTTTCTCTGGTGGCGTGTTTTAATTTTTTGCTTTTTATT
TTTTGAGAACCTGTTGTATATTTTTTGATTTGCGATTACCAGGAGGCTTGTAAATAATATATTGTAACTCATTATTTTA
AACTGATAACAACTTAACACTGATTGCATAAACAAACTAACAAGCAAAGGGAAAACCAATAAAAACTCTACATTTTAAC
TTTGTCCCCCGCTTTAAAACTTTCTGTTGTCTTTATATCTTATTGTATTGTCTGTATTTCAAAAAATAGTTGTAGTTAT
TATTTTTGATCAGTTTATCTTTTATTCTTTCTATTTAAGATATGAGTTGTTTACATACTATAATAACAGTGTTATAATA
TTCTGTGTTTTTCTGTGTATTTACTAATGCTAGTGAGCTTTGTTCCTCCAGATGATTTCTTATTGCTCATTAATATGCT
TTTCTTTCAGATTGAAGAGAATTCTTTAGCATTTCTTACAGGATAGGTCTGGTGTTGATGACATCCCTCAGCTTTTGTT
TGTTTGGGAAAGTCTTGATTTCTCCATGTTTGGAGAATATTTTTACAGGATATACTAGCCTGAGATAAAAGTTTTTTTC
CCTTTAGCACTGTGAATATGTCTCCTGCCCTATAAGGTTTCCACTGAGAAGTCTGCTGCCAGATATATTGGAACTCCAG
TGTATGTTTTTTCTTTATTTTTTCTTGCCGCTTTTCAGATTCTTTCTTATCTTTGACCTTTGTGAGTTTGAGTATTGAA
TGCCTTGAGCTAGTCTTCTTTGGGTTATATCTGCTTGGTGTTCTATAACCTTATTATACTTGAATATTGTTATATTTCT
CTAGGTTTAGGAAGGTCTCTGTTATTTTCCCTTTGAATAAATTTTCTACCCCCATCTCTCTTTCTAACTTTTTTTTAAG
GTCAATAACTCTTAGATTTGCCCTTTTGAGACTATTTTCTAAGTCTTCTAGGAATGCCTCTTTCTTTTTTATTATTTTT
TCTTTTGTCTTCTCTTTGTATTTTCAAGTAGGCTGTCTTCAAGCTCACAGTTCTTTCTTCTGCTTGATTGTTTTGTGCT
GTTAAGAGACTCTGAGACATTTTTCAGTATGTCAGTTGCGTGTTTTAACTCCAGAATTTCCGCTTGATTCTTTTAAATT
ATTTTAATCTCTTTGTTGAATTTATCTGATAGGATTCTGAATTCCTTCTGTGTGTTATCTTGAATTCCATTGAGTTTCC
TCTGTCTAAAAGGTCACATATCTCTGTCTCTCCAGGACTGGTCACTGATGCCTTATTTAGTTTGTTTGGTGATGTCATG
TTTTCCTGGATAGGCTTTATGCTTGTGGATGTTCGTTGTTGTCTGGGCATTGAAGAGTTGGGTATTTATTGTAGCCTTG
CAGTCTGGGCTTGTTTGTACCTGTCCTTCTTGGTGAGGCTTTCCAGATGCTTGAAGAAACTTGGGTGTTGTGGTCTGAG
TTTTGGGTCACTGCAGGAATATCTGCATTAGGGAGCACTCCAAGCCCAGTAACACTGTGGCTCTTGCAGAGGTACCACC
TTAGTAGTCTTGGATAATATCCAGAGTCATTCTCTGGATTACCAGGCAGAGACTCTTTTTTCTCTTCTCTTACTTTCTC
CCAAACAAACAGATTCAGTCTCAGTCTGTCTGTCTGTCTGTCTGTCTCTCTCTCTCTCTCTGTGTGTGTCTCTGTTT
CCTGGATCTGGGGGAGGGGTAACACAAATACCCCTGTGGCCACCACCACTGGGACTGCATAGGGTCAGACCTGAAGCCA
GCATAGCACTGGGTCTTGCCCAAAGCCTGCAGTAACCACTGCTTGGCTCCTGCCTATGTTTGCTCAAGGCACTAGGGCT
CTATAATCAGCAGGTGGTAAAGCCAGCCAGGCTTGTATCCTTCCCTTCAAGACAACTAGTTCCTCCTAGTCCTGGGCAG
GTCTAGAGATGACGTCCAGGAGCCAGGGCCTGGAGTCAGAAATCTTAGGAATCTACCGGTACTCTATTCTACGGTGGGT
GAGCTGGCACCCAAGTCACAAGACAAAGTCCTTCCCACTCTTCCTTCTCCTTTCCACAAGCAGAGGAGTCTCTCCCTGT
GGCCACCACTGCCCCAGGCCTGCGACAAGTACTGTCTGGCTACTGCTGATGTTCATTCAAGGCCCAGGGGCTCTTCAAT
CAGCTTGTGGTGAATGCTGCCAGGCCTAGGAATCTATTTGGGGCAGTGGGCCCACCTGTAAGCCAGGGAAGGTCCAGA
AATACCATCTAAAGCCAAGCCCTGGAATCAGGAACCCCTAGAACCCCTTTGGTGCTTTACCCTGCTGTGGCTAAGCTGG
TACCTAAGCTGATTTTTGGTTCTTATGAAGGTGCATGAAGGTGCTTTTTTGTGTGGAGAGTTGTTCAATTTGTTGTTCC
TTTGGGAGGCTGCTATTTAGCCATATGGCTCCACCTCCCTCTCCATCCAAAAAGAAAACTTTAAATGAAAATATACATC
CAAAGAAAGTGTTTTTGAAATAAAAAATAAATGGTCTTAATTCCAAGGAAAGAACCAACATAGTAAAGTAAAAATGCAT
TTTTTCCAAAAGTTACTTGTTTGATCACATATTGTATTTTATTTTAATGAAATATCTAGAATAGGTAAGTCCATAGAGA
ATACAAAACAGGTTAGTAGTTGCCAGGGAATGTGAGTGTGCAGAATGAGGAGTCATTGCTTAATGGCACTGTTTTCAAG
AGTTACTTTTGAGTACACTTGCAGTCTGGTATCTAAATAATTGAAATATTTGAAAGTCGTGATTCCTAGAATAAAAACA
GTGACTAACTTTTAATGATTTCAATGTCATGTGCACAAAAAAACCATGTCCAGAGTAATAAGTTTACCCATTCTACCAT
TCTTTTCAAAGAATTGCTTAAATAAGTTTTAAAAAATTTCCTATTGAGATGTTACTTAAAATACGATTTGTTTAGTTCT
CAAGGTTATGCTTTCCCCAGGTTATGCTTCATTTGGGTAATCTAAGTTTAAGTCCTAATGTAAGACCTAGGGCATGGTA
CTTAACTTCCTGTAGACCTCAGTTTTCTTGACTGTGTGGTGGAAGAAATAATAGTACCTAGCTTGTGAGTTTGTTTTAA
ATGTTAAATGAGAGAACATGTGGAACATCTTACCCAGTGCCTGGCACATGGTGAGCAATCAATAAATGGGAGTTCATCC
TGTCATCTTCAGATTTCTCTTCTGGAGCCAGCCAGGCTTGAGTTCTGACCTGGTTCATCCACTGAACTTGTAGGGGAAG
CACTTAGTGCCCTTCGGTCCTCTCATCCAGTACATGGATATACAGTCTTCATGTGGTTGATACAAATACGAATGTGCTA

Fig. 9.279

ATGCATCTTTACCAAAAAGAGAGGTAAAAGAAAGGAAGGATAATCCTGCCAGAGATACATATGCAAAGATCTGAAAGTA
ATCGAGAGTGAGGGGTTGCAGATTGGACAACACTTAGTAGTGGCTCCAGATAAGGTTCTTAAAGACTGGCCAGGATGCA
GCCTTTTCATCCAGAGAAACAGCCATCTCATTCATAGACAGTGGTGACTGATTGGCAGATTTTATAAGATGACACAAAC
ACCCTCCCCATTGTCCTGCCAAAATGTGGGGAAACTCTTCCTGGAAAAGTTATTTCTTTGAATTGAGCTTCCAAAAGGT
TCCTATTAGAATTCAAATACTCTGTCTGGGTTGAATATCACATTGCATAATAGTTTCTCCAGATTAAGGCCATTTTTCC
TAAATATTTAACAAAAAATTTTTCGCTTCTTATCAATGATGCTGGCGTTGGTTCAGTGCCTGCATAAGACTTCTTCCAG
TGTATTTCTTTACCCTGGCAACCAGTTCCTTTTTCTTTGGGAGAATTTTTTTTTAATTATAACACTATTGTAGGAACT
CCTTTTTGGCACAGAAGGCATCTAAAGTAACTTTTAGAGATAGAGGCTTATGAAAAACAAGAAAGAGGCAAGACTCAGT
TTTTGAAATCTAATTCCAGCCATGAAGCAAATGCCACAAAAGGGCACAGGAAGAAAATCTGTAAAGGGCTTATCTACCA
CCGTTGACCAAAGATTTATTCTGCTGTTAAGCAAATACCTTGTAAGCCAGATATTGTGCTAGGTATTCTGAATACAAAG
ATGCAGAAGCCTCATTCCCTGTTTTCTTTTTTTTTTTTTTTATTATACTTTAAGTTTTAGGGTACATGTGCACATTGTG
CAGGTTAGTTACATATGTATACATGTGCCATGCTGGTGCACTGCACCCACTAACGCGTCATCTAGCATTAGGTATATCT
CCCAATGCTATCCCTCCCCCCTCCCCCACCCCACCACAGTCCCCAGAGTGTGATATTCCCCTTCCTGTGTCCATGTGA
TCTCATTGTTCAATTCCCACCTATGAGTGAGAATATGCGGTGTTTGGTTTTTTGTTCTTGCGATAGTTTACTGAGAATG
ATGGTTTCCAATTTCATCCATGTCCCTACAAAGGACATGAACTCATCATTTTTTATGGCTGCATAGTATTCCATGGTGT
ATATGTGCCACATTTTCTTAATCCAGTCTATCATTGTTGGACATTTGGGTTGGTTCCAAGTCTTTGCTATTGTGAATAA
TGCCGCAATAAACATACATGTGCATGTGTCTTTATAGCAGCATGATTTATAGTCATTTGGGTATATACCCAGTAATGGG
ATGGCTGGGTCAAATGGTATTTCTAGTTCTAGATCCCTGAGGAATCGCCACACTGACTTCCACAATGGTTGAACTAGTT
TACAGTCCCACCAACAGTGTAAAAGTGTTCCTATTTCTCCACATCCTCTCCAGCACCTGTTGTTTCCTGACTTTTTAAT
GATTGCCATTCTAACTGGTGTGAGATGATATCTCATAGTGGTTTTGATTTGCATTTCTCTGATGAACAGACACTTCTCA
AAAGAAGACATTTATGCAGCCAAAAAACACATGAAAAAATGCTCATCATCATTCCCTGTTTTCAAAGAAACTCACAGCA
TTATGGAGGCCCAGGTTTCTATTTGGGCCTCCATAATGCCTTGTGCTCTACCAAGAATGGTAAAACAATCCTTTCCAGT
AGGAGTTCCTAGTTAGTGGCTTATAGTTAACCAAATGAAGAGAGGATGACCATATGGTGCTGATAAATTGAAAGAAATT
AGGATGAACATCTAGAGATTTGCATGGCCAGACACCTAATTCAGATTGCAGAGCAGCAGGATGGGAGGCGTAGTCCTGA
TTTAACTCTTGATCAAAAAGAGGGGTAAAAGAAAAGAAAGATAATCCTGCCAGAAATGCGTGTGCAAAGATCTGAAAGT
GATCAAGAGCAAGGGATTGCAGATTGGACAGCATGTTTTCTCATTTAATCCCAGAGGAACCCTGGGAGGATTCTAGGTG
TGCATATTGTCCTTATTTTGTAGAAGAAGGTACTGAATCTTAAAGAGATAATGTGTTTTCAAAGCTTACAGAGTCCAAA
TCGATAGCTAAACAGTGTCTGTGGGATTTGAATCCCCCTGTGATGTTCACTGTGTGTTGCCATATACTGCAAATGTGTT
ATAAAATAATAATTATAATAAACAAAATTAACCTGAGATATTCCCAGATTGAATCAATCCAAGGAGACTGAACTTCTGA
GTTTGTCTTGGAGTTAGTTGGGCTTTACTGCTACTTATGCTAGATCTTGAAGGCAGAGTAGGAAATATACTTAGCAGGG
AAGTGGGAGAAAGGTGAGAGGTTCCCCAGGCAGGGGAAACAAAGTGAGCAGATTTGGGGCAAGGTGTGTGAGATTGTGT
GGTTGGCAATATAGGGTGGGAAAAATTAGTTATCAAGGGCAAAGCTGAATAGCAGATTGAACCCAAATGGTAGAAGTTT
TTATTTAACACACAAAAAAGGCTGAAATTGATCCTGTAAGGAATATGAAGCTATAGAAGGTTTTTCATCACAGGCTTTG
ACATTTTAAGGTTTGTATCTTTGAAAGATAATCCAAAGATAAGAGAAAAAAACCTTAGATGTGTAAAATAGAAGTCAGG
AAAACTACACAAGCTATGTGTAAAGGGAGTCAAGGGGACAGGATCCAAAGGAAGACAAAAGCACAAACCAATTATTTTA
AATCAAATACTAGTGCAGTAACATATATTTTTAAGTTTTAAAGCTGCTTTTCTCCATAGCTTATTGATTACTCTTTTAA
AACTTATTTTTAATAGCAGATATTATTTATTGATTCCTTACCATTTTCTAGATACTTTGCTAAGGTTTTACATGTCTTT
TTTAGTCCTCAGAAAATTCTCTTCTATCTCCATTTTATAGCTGAGGAAACTGAAGCCAGGGAAGGTTAAATAATTTGTT
TGCAATCAAACAACTAGTGATTGGTGGAATTTGGATTTGCAACCAGGCAGTCTGACTCCAAAGGCCTCTTCTTAACTTG
ATCCTACATACCCTTCCTAAATAGTAGGCGTTTTTCTCAGAGCAGCTGTTTTACATTAGAGAAAACTTATTTGTAATCT
GTGATCAAGGAGAAACTGCCTGAGTTGCCTGGATTATTTTGGCATTTTTAATATGTACAAGAAAAAATGTTATCAAATAA
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GATTTCTCAAGGTGTGAATTGTTATCTTCAAACTTTGTGCTTCCATAATTGTTTTTTCTTTAATAATGAGACATCTAGA
CCATAACTGGCTATGTGATTCTGAATCTACCTTTACAACTTAATCTTTGTGATTCCCCTATATAAGATATCTAGAGTAG
TCAAATTCATACGGACAGAAAGCCAAATGGTGCTTGTCAGGGGCTGGGAGAAGAGGAGAATAGGAAGTTACTATTAATG
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ACATTACACCACTGATCAGTATACTTAGAAAGGGTTAAAATGTCAATTTTACGTGATGTGTATTTTACCATAATAAAAA
ATACTTAATATTTACCTATGCTTAGAGAGAGTTGACATATAGTCATTTGATAAATAAAATTTGTAAATGCGTATGCTTA
GATAAACATAGAAAATTGTTTTAAAGTAGAACTTATAGATTTCTAGCTTTAAAACTGTGGAGAAACAATCTTCCTATGC
CATTTTTTTCTTTAAAAAGTCACTCAAACCAATAATTAGTACAAAAAACAGAAAGGTACATTTCATCTTTGAGGAAACT
GGGAGATGTCTGTGACTCTAAGCCACAATACATAAAGATAGAAGTAGGAAGAGAAAAGGTCAATGACTTAACCAAATCA

Fig. 9.280

GAGAACAATACTAAAGTGAAGCAAACTGAGCTGCCCCAGTCGCCCAAAACATACTTTGGAAGATGGAAGAGTTCTAAAT
ATAGCAGGTGTATGAACATGTATATTATATACACTTCTCCATAAGCCCTCACTCTTTTTCAGTGTAGTCAACATATTTT
GCATCCCTCTCCATGGAAGACAGAGACTTTGGGATACTAAGCAAAGAGTAGGAGAAGGATGGCTGTATGTTTAACTTTA
TTTAGGACAATTAAATGAATGTCTGCAATGTGTCAGTAAGACCTTCAGCGTCCTTCTCCTACCCACACCAGAATGCTAG
GAAGCATATTTATATCCTTCTCTAGAAAAATAGAGATACCCCAGAGGAAAAAATCTCTTACAAATAGTAACATTTGGAA
GAGGCAAAAAAAAATCCCCACTGGGCACTTGATGATACTGCAGTAAAACTCCCAGTACACAAGCCTCACCCATGCACTTA
GAACTTACTGTCACCTTTCTAGGGTCTCATTCTTGTGTATGAATTGGGATCAGGAATCAATGCTGGAGTTTGAGGATAT
TACACTCATTGCTCTTTGTTTACATTATTTACATGTATTTCTTTAATAAAATTTAAATATTTAATTCAAAATAATGTTA
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AAAGGAAATACAGCAGCACTTAGAAAATTTTAAATTAGATAGTTTTTCTTCTGAAATCCAGTATTGAATTAGTGCAAAA
TTCTGAAAGTCAATTACAAAATTCATTTTATGTCAACATTACTGACTCCATGCACAAATGTTTATTCTAGTTTTAAAAA
CTAGTATTCTGTACCTTTTAATAGCCAATGTAATTTGTTGACAAATATTGAAATTTATACGTTACCAGAGGTCTCACGT
ATTGTTACCTTTTAAAATGATCATTTATTAACCAGTATTGCCTAATGAGGCAATCAAAATGTCATCTGTTGCATAGGTA
ACAGGAAACTACCATTACTCATGTTGTGAGATGGTCAAAGACCTTATCATATTTTATGGCTAACAAACTCATGATGTTG
TCATATATGCCCTCATCACAGTGTTTATGATACCTAAAAGTTAGTGCCTAAAAATTAGAAACAAGGACAGTGAAGTTAG
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TGCACCATTTTTATTATATTAATTCATTGCCACTGTACAACTAAAGAGGATGGATGAATTTTAAAAACTTCCAAAAACT
TGGTAGCATTTTTTAATCTCTTTCTCTTCCTCTTTTCTTTCTGTCTTCCACACACACACACACACACAAACACACACAT
ACACATACATACATGCACACATACACATCATGAAGAGCAAGCTTTGGAATGAAATATACCTGGGTCCAAAAATTTTGAA
CAAATTGTTGACTTTCTTTATGTATGAAATTATTATTATCACATCTACTTTGGAGGGATGTTGTGATGTATAATTAAGA
AAGTATAGTCTACTTAGCATGTAGGTAATTAATAATTAGTAGTTATTATTATTATCCTAACCTGACAGTTTATGAAAGA
GGTAGGAAATCTGAAGATAGGAAAGCCTTCAAAATATAATACTCCGGACTTCTCCTTTGGGAATTAAGAAATGTAGCTC
CAAGCAAGGTTCATGCCAGTAGGAAAGTCCTTGAATCCAACTGTATTCCTAGTAAGTGTAATAAAATAAAAGAAACCTC
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TTTTCTAAAAAGTTAGTTTGACATATCTGGAGTACTGAATTTCAGCATATTTGAGAGGCCTGAATATTTAGTTGATATA
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TCCGTAACACCTCATTCAGTTGGCTTCATTTAATGTTTAATGTTTAATCCATGGATAAATGTCATAAGTCTCACAAGTC
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AGGAACAGCACATGGGGCTGCACTAAACTTGTGTGTGTGTGACAGAGAAGGGAGTAGCATCAGGCTAAATAAGCTCATT
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TCTCTGATCATTGTCATTTGCTTTCTGAAATGGCAACTGGAAGCTATTTGGTAGACCTTACATGGAGGGAACAGTGTTT
CAAATAAATAGTAGTTGCCTAATTTTACTTGGTTTGCTTTTGTTCTTTCTTTTCCCACATTTAAATTCCAATAAGAAAA
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AGAGTCATTGAAAGAAGACTAAGTCACAAATGCACCTTGAAGTGTGACCAGGGGAGCAGATGAAGGGTTTGTTGTAAGA
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GAATGCTTACATTATTTTCACTTGGTAATTCACATCCAAAATAATTGAAGTTGGCACACCCAGAGGAGTATATATCCTC
TGTGTAGATGTTCAGAGAGATAGGCAGGCTGGTCAACTGTTCCTTCTGTTGGGAGCAATTGGAATCAGCTTAGATTATA
TCTACTGTAATAGAAAATATTTTATATTTAGGAGGTGGGAAAGGTTTTGGCCTTCGAAATAATAAGAGATATTGACAAG
ATATAAAGCTTCATTCCTTACTGAAGAGCTGTTAAGGATTAGCAAACCCAAGTCTTTGTGTGTAGAGATGAATGAAATT
TGCATTTTTTTTAAAAAAAAATAAGGTTTAGAAAACATTGTGCAAGGGAACAGCCTTAATACGTGCAGCCACTTGTCCA
GGAATAATACATTCAATTTTTCAGTTTAAAATTCCAGTATGTTCTGATCCAAGGGTGCCTGTTACACTCTGCTGAATTT
TTAAGAGGTAATTTACATCTCTACAACCAACTCCAAAGCATGACATTTCATTACATCCGCTCAAAATGAACAGCTGCTA
AGTCATCAAGTTCTCTCAACTTTGCTTCTAAAGAGAAAAGTTTAGTTTTAGTGCTTCAGTGAAATACTTTTTTGAAAGA

Fig. 9.281

ATGACTTTTATAAAATTCATTTGTTTATTATGGTAAATAAACAACTTAATGGCAAGGGGTGTGTTCCTTGTAAAGGTGA
TCACGGAATGTTACCCAGAATAACACAGACATCTCATTTCCCAGAGAAGGAAATGGTTTTATAAGTTTTGTGAGGTCTC
TTGTCTGCTTGGCCGGTTTACAGTGCTGGTCTCTGGAGCTGATCCGCCCCTTTGCTTTGTAAGTCTCAGCAATTGACGA
GGCTAGGCTGGGCGCTGGGCTTTTCTTTTTTTTTTTTTTTTTTTTTCCTTTCTCACTGCCCTGCGGTGTTTTGAACTGC
CTTCTTACAGACGTCATACAGCCCTTGAGGAATAGTTTCTGCCTGGTGAGATTGAATGATAGTTCTCATTCACAAAACC
CTGGATTCTAAGCAGGGACACACAGAAATTACTTTCGCAGGTAAATCAGCCCACCCAGCCAAAGTGTGGAGAGATTTGT
TCCTTGGCTGACTTCTTTGCTCCACGGAGAGGAGTGTTTTCCTGTGCTTGCCCTGAAATGGAACTTCCTTGACAGCTCT
CCCGTGTTACAGTACCTCCCGGTCATTTTCTTTTTCTCTCTCTCTACCTGCGCTCTTCGAGTGTCAGAAACCTTTAAAG
CTGTTACTATGGAATTGCAAAAAAGAGATCAAGTGACTCTTTCACTATGCTGGTTTCCCTTGTGACCCAGATGAAGAAT
CAATTCAGAATTCAGTTCCTCCCTTGGCATTGCAAGACACAGAAGAAACTGTCACTTCCTAACAGCCTAGTACTGGAGT
AAATTCAGTATGAAGGAAGAAAGCGCTCCTGCGTGTTAGAACCTTGCCCATGAGCTGGACCGAGGACAGGAGATGGACT
CCAGGAAAATTGGATTTCTTCAAGCAGCCTCCCTTGGAAATGGAATATCTTTAAAATCTTCTTTGCAGAAAGACAGTTA
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TCTTTTATTCTTTATTTGTTCCCAAACTCATGTGCTTTAACCAAATGGGTGCTGATTTTTTTTTTAATTCCTCTTGGA
CTGTAACAATTTATCTGATGATAATTTTTAAAGGAGGAAAGAAACTTGCAGATATGTTGGGAGTTTTGAAAATGAAAAC
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GCTTTGCCCTTGTCTTTAAAAGCAATACCCTCACTTTTAGCACAGATGTGTTAGAAATTAATAATGTTATTTATATTTA
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AAGGAGTATTTTCCAACAAAGTAACTTTTTTTTCTACAATAGGTATTTACAAAATACTTTTATGGCTATTTTAGGGGTT
AGTCTTATTTTGTTTTTCTTAGTGATTGATTATAAATAACTAAGCTCACCTCTTTGAAATGGAAATAATCATACCTCAC
ACTGGGGAAATAAAAGCAATGATTGAAGTGAGGTGGTTGAGAATGGGAGGAAAACAGGCCAGCAAAATATGCATTATCA
TGTGAGCAGGCAAACACACATGTAAATACTCAAATTATTTGCGTCAGGAATTTAGCTTGTGTTTTTGTGGATAGGTTAG
CCTTTGCTGTTATTGTAGTGTTTTACAGTCAACCAGAAACAAGAATTGCCCCATCCGCAGTATTTCTGTGAGTTTTAAT
AAATTATAGATGAAGATTTTGTCTCTTAACGTTACTTGCCATTTCTTACAAAATAACACGTGCAATAAATTATTCCTTG
AGTTTATTTAAAGAAAAGATTGCATCTGCAAACAAATTTGGAGAGTCCTGTCCTTTTTTTTCCTCAAACAATAAATACTG
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TATTTCTCTTTTTGTCTAAACTGCCAGGAGATGTATTTTCAAATTCAGGTTTCAATTGGAAATAATTTGTTCATTTCAG
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TATATATGCATGATTCTTAGATTTAACTACACACTATAGAAACCTCTCCAGTTATTAATCTTACATCTGACTTAATAAT
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AGATTATAGATTTGGTATATAGAGAAAATATATGTTTGTGTGTATATATATGTATACACATACATACACACACACATGT
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AGAGGGACAATGTTTTCTCACCAGTGTTGCTGTCTGCATTTCTCCACCACCACCCTACCCTCATTCCTTTTCAGTTGAC
TTCCCATGAGAGAGACCTAAAACTTTGCCATTTATCTCTTTTTCAGATGTTTATTTGTTTCCAGGTTGATCTCCAAAAT
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TACTTTCTCCAAATCTGTCTACTGTCCTCCGGGATTCCCTAAAGCCAAACATTACGTTTGGAAGTTTGTTGTATTGTGC
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AACTTGTCCTTACAGCCTTAATTAAATTGCTATGAGATATTCACATTTTAAATGGGATTTCATGGCAAACTTGTATTTT
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AATTAATCTATTTGTCTCTTTGTAACATAGGTGTCCAAATTTAGGGTTTATTTAATAAAGGTGTATACTAGGTTGCTTT
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AAATGTGCCTGCATGAAATTGAGAAAAACTTTATATATTTTCTTATGCTCATAAAGCTAATAAAATTAGCAGATTCATT
GATTGCAGAATTGTTTGCCTTTCTTGCATATCTTAAATTCAGATTTAGTCAGTTGTTATATACTATGAAAATATTACCT
TACATATTCCTTGATATCTCTTTAACACTTTTATAAACATTTATAAACATTTCCCAGGGATACTTCTCATTAATGTAAT
TAAGACTTGTGATTTAGTTTAAGTAAGTAAAACATTATTAGTCTTACAAATATAAATATAAAGAGAAGTTTAGTCAATG
GAAGTGGACTTTTTTCTTTCCTGCTGACAGAACAGTGTTTAGGATTTATGTGTTACATGTAAGATCATTCATTATGTAA
TCTGAAAATAAAAGAGATGCTACTGTTCAAAATATGACTGTGGTTGTTTTTAAAGCAAATTTTAAAATTGGTTATTGTA
TATGTAATAGTACTTATACTTTTCATTATAAGTATTATTATGTAATAAGTATACATGTAATACTTAGGTTTGTAGATGC
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AAGGTAAGGGGGACTGCCTCTCTTTTCTTCACTGTATTTGCATATTGTATGTAGTTTTTATCAATAAAGTATTATATAT
GAAAGTTTAAAATATTAAAAATATACCTACTATATGTATTAGCAAGCTCATCTTTATATATGCCAATATCTACTTAGAC
ATTAAACCACAATTTGCTCAGGTTATATAATATGCAAATGAGTATTTCAGTACTGGTTGGATACAATTTTCTGAATTTT
CTTGCAACTCTGACCAATGGAGGATTATAATTTTTTTATTAGCTCTTTTCTCTTAAGGTTGTAAAAATCTAGACTGGCT

Fig. 9.282

TAGCATTCTTATTTTGGCCTCATGATCACAGTGGAAAGCATTCATATAAGCTAAAATGTCCAATTTTATAATTGAGAAT
CAAAAAGATGGAATAACATTAATATGTTGGAAGGAAAATAACCCATTAACCCCATTATTCCATCCTCAGTTATTCTCAT
TTTCAACTTACCTTACATATCTTAAATAGCTGTAAATACTATTTCTGTACTCTGCTTCTTCATTTAACATATCAATATT
TTTCTATTTTTGGCCAGGCGGCGTAGCTTGCTCCTGTAATACCTGCAATTTAGGAGGCTGAGGCAGGCAGATCGCCTGA
GGCCAGGAGTTCAAGACCAGCCTGGCCAAAATGGCGCAACCCTGTCTCTACTAAAAATCCAAAAATTAGCCAGAGTGGT
GGAACATGCCTGTAATCTCAGCTTCTTGGGAGGCTGAGGCATGAGAATTGCTTCAACCCAGGAGGTGGAGGTTACAGTG
AGCCAAGATCGTGCCACTGCACTCCAGCCTGGGTGACAGAGCAAGACTCTGTCTCAATTTAAAAAAAAAAAAAATCCAT
TTTTCTAATACTTATAGCTTTCATTTTATTGAGTGTCTTATGAAAGAGCTCTATCAAGAATTTTACATATATATTATTT
AGTTCTTATTACAATATTGAAAAGAAGGAGTTGTTAATCCTAATTTTACAGGTGAGAAAATGATTCCGTGAGATGAAAT
AACTTGAGCAAGGTCATAGGCTGGGGTAACCCAAGTCTGTCTACCTCAAAGAACGTGCTCTGGTTCTTCAGCTTGTTGC
CTTCCTCTACTGTGGATATAATTATCTTTTTAATGGCCATAAAAGTGTTCATGTTGTGAATATTTCTAGATGCATTACA
GTATTTGGCAGTTTTCTTTTCGGAAGTATGGTAGCCTATGAAATTCAGGGTTGACGTTGTTGGTTGTTGAAAAATAGCT
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TAGCAAATAAGGTCCTCTGGTCTTTATAACAGACAATAAAGAACAAAAGGCCAATGCCTCACAATTTTGAATAGATTAT
CTTTCCAATTCTATTACCAAGTTTTTCTGTTCTCTGCAAGCTCTGTAAGGCTTCAGGTTGGAAACAAGTAGTACATATC
AGATTTTGTATGACATCTAAGATCAGCTTTGAAAAAAAATATGCAATCTTCCTTCCTATTTCTTCTATCTTAGAAACTTG
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TGTCAAAGTTGGTTCAGGGTTTTGAGCATGAGGTAAACTTTTTTTGGTCCTATTACCCAAGTTAGTGATGTATCTGTTA
TGAAATATACTTAAAGATATACAGCTTTTAGAAATGATTAAGATACCTTGAAATATTTGATGTATTTAAAACATAACTA
GAAAGACACAGAGTGGATCACAGATAGGTTTACTCTTTAAAGTCATGAAGTATGAGATTCCCTGGAAAAAGCCATTTGT
CCACTGTACTTCTAACATGCTCTGTGTCCCTGGAGGAGTCACCTAGTCCCTCTGAAGCCAAGTCTACTGTCCTGTAAAA
TAAAAGGGGCAAGGCAGGTCAATGGATTTTAAACACGTTATTTCAATGGGACATTTTTTATTAATGAAATGTGAGTTG
AAGTTAATATAAATGAATATTTATACTGTAATTTTTAGATATAAAATCATATATAAATTCAATATATAGATATAATTTT
TAAAAACATAGATATGTGTGAAATATATAAGTAAAAAGTATAAGCACACATAAAACAATAAAACAGCCACTGAGTTTGT
ACATTTACCCCCCACCCCAAATTCAAACCCTCTCCTTAAAATACCTCTAAAGACTTTAGGATTCCAAGGAATATTGTTT
GAAAACCACTAAGCTAATGACTGTTAAGATCACTTACAGTTTTACTCTCTGCAGTGCTGCCTTACCGCGGGAGAGTCAT
TTGTGTATTCTGTATCTCTATATGGATTGGGATAAACTCGTAGGTAATGTAGCAGTTCAAATACCTCTGCCTTATAAGA
CCTTGAAGTTATGTAACTTTTCCCACTTCTGAGATATCACAGAAGAGTTATCACTATAATAGTTAAGATCTATTCATTT
TATTTAGCATCTTATTTTTTACAAGTTTATTTTAGGCTCATCTGGAATGAGAAAATCATGCACTAAACACTGTATGATG
CATAGCTGATAATTCAGGAAGTGAGTATGGTTGTTGGTAAAGAAATGCTGAATTGGTATGAAATTCTTCAGAAGCAAGA
CGCTTCTTTTGGTATTTCAAAATGGGGTTCTCCACCCTCTTTTTCTATCATGTCAACTGGCTGTGGTTATGTGTGCAAT
AATACTTAGTCCTGACTGCAACTCTTTTTTTTTTCTTCCCCACGGATCTGAGGCACACCATGGTTTTGGCCTTATCATT
AAAACTTGCCTTTTAGGAGAGGTAAAGGAATAGCTCACTTAGTAGTTCCTCTGTCAATCATTCCAATCATGTAGTGAAT
TCTATTGAATCAGAAGGGATGATGACATGAAGGTAACCATGAGTATACGAATGGTTAGTCATGGATCCACCCAACCATT
ACTAGCAAGATTGAGAAAAGTAGATTCTAAGATGAAACTGAAGGGGAAGAATATTAATGAGGCCTTTAAGGAGTTTTTA
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GTTTAGATAAAGGTATAGAGAATAGGGCCTGAGGGATATTAGCTAGGTTGGTAAGGAAGATAGTCACAAAGAAAGCACA
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TTGAAGGTATATTAGAAAATGGACAGAAGTAAGGTATACTTCAGCCACAAGCACCAAATCTCTCCAGGGATTGGTGCCT
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CAGTGTAGAGGACATTTGCCCCCCATCTCAGCCCTAAGAATTTCTGCCATAGGGTAAAGGGGGTCACCTGCAAGCCCTT
CCATTTCCCTACTACACATGAGGAAGAATAAGAAATTAGAAAACTAGAAACTAGGTGTAGAATGTATGCACACCAAGGA
TTGCATCTTCCAAAGTACCCTTATAGGAAGCAGTCCTGTTGTTTTAAACCCACAGAGTTAGGAAGTTTTCTTTATATCT
AATACAAATCTTCTTTGCTTAAATTCTAACCCATTTCCTCTTAGTTGTCAGTAGATATAATGAGAGTGAATCAATAGAT
AAACCAATTCTTCTTTATGGCCTTTGAAAACTGCTAGTGAGTGACTTCTTGGTCTTTTTTCATTTCATATTGCAAAATA
TTCATTCTAAATTGTAAAATAGATGGCACCAGTGTGACTTGTTAAAATAAATGTTTCATTAAACATAATTTCAGTATGT
AATTGTTTTCAGACTTCCTAGAGAAAAGTGCTCCCGTTGTATCTAATTCTCTTTCTTGTTTAAAATACATCAAAGATGA
GAAATTGAGCTCTTTTTAGTGAACTTGCTTGAGACATTCATATGGAATACAGAAAATAATAATTCCTAACATTCAGGAT
GTCATTCCATTGCAATGTGGCACAGAGTTTTTTCTTTGCATCAAGGAATTTATATGACTGATACTATTTTAGTCAGGAT
AAATTACTGTAAAATGTGTCCACTTTTAACCAATGGCATTCTAACATGGGATAGGCAACAGCGGGCTGTGATTTTTGCT
CTGATACTGCAACTTTGTTATAGAATAGCAAGTAACTGATTGGCAGCTAGATCACCAGCTAGCTGGAGAAAGCAGCTTC
TAGGTCTATAGTCATAGTTGGAGTCATAACCTCATTAATGATAGCTACAATGTATTGGGCATCTACTCTTTGACAGACA
ATGAACTTAGTACTATATACAGTTGAAGCAACTGTATGAATAAACTGTATGAATAAAACTTGAAGTCGCACAGCTTATA
AAATTACAGTGCTGCAGAAAAAATCTTGGTCTGTCGAAACTACATCCCATATTTGTTGTTGTTGTTCTTATTGTTTTGTT
TGCTTTTCCTCACTATCTAAACTGCTTTGGCTACACATAGTTCTGTTTCATGGTATTAGAAAAGTAGTCAACAAGCTGC

Fig. 9.283

TACTTATACTTTTCCTTCCTGTCCTAGACTGTTCAAGTTTCTTCTTTTAATCTTATGTATATCAAGAACATGTTTGCCT
ATGGTATTTGTCTGCCTTTCCCCCCAAGATTTGTATACAAGCCTCCAACCGTGAGCCCTAGAGATATATTGAGAAATAG
AACATGGACTTTGACACGGCTCCATTCCTTGGAGATCTAGCTAGTTCCTGACTCGTTCAGCTTATTGACTCTCTTCCTC
TGGTCAGACTATAAATTGCAGTTTTCCTTCTCTCTGGCATTTGACCAGTTAGTAGCACCATAAAACCTTTGAAATAAAA
GAGACCACAGAGAATAACCTATAATCTGATTTTCCCCACCCCTAACCCCAATGTGGAGCTGGAAACATTTTGCTAGTCT
TTAACATTTCCAGTCAAGTAGGGTCAAGAAAAACTGTTAAAAACAATGTCAATGCTTAAGTGGTAAAAAGATTTGTTGA
AGAATATATATATATATATATATATTTAGAGACAGGGTCTCACTGTGTTTCCCAGGCTGAGGTACAGTGGCTATTTACAGG
TGTGATCATATGCACTACAGCCTTGAACTCCTAGTCTCAATCCTCCTGCCTTAGCCTTCCCAGTAACTGGGACTACAGG
CATACACCACCATGCCTGGCTGGAGAAATATTTTTTTAACTTCAAAAATGAAGTTTGAGCTGAAAAAGAGAGCTAAAAA
TTAGTCTGTCAGGCAAATGTGTGAAAGCAGTTCTATTATAATTTGTATTGAGCTATAATGTAATTCCTAAACTTATGTC
ATATAGCTAAGTAAGTAGCTGTAATTCGCATCTTGAAATTTTAAATTTACTTCTTTCCTCTCAATATAGTCTTCATCTG
AATTAAAAATTGTGGCAATTTGTATTTATTGTGTACTTAACTATGTGCCAGGCACTGTGCTGTTCACTTGACCTAATTA
TCTCATTAGATCCTCATGATGAATCCTAGACAGTACTCATTAGTCTTATTCCTCAGACTGAGGCCTAATGAAGTAAAGT
GGCTTGCCTAAATTTGAGTGGCAAATAAGATAATTTCATGATTCGCATATTTTCTTAATTATAAAATGTTACCTTTAGC
AATGATGTATATGTTAATATGTTCAATGAGTTGATCTACCTGAAGTGCTTAGCACATGGCTGGCTCCTTGTGAGTGACC
AGGAACTGTTAGCTTATATTATGCATTTTTGAAGTTTACACATTGGTATGACTTTCTAAATAATCAAGAACTCTAAATG
TGAAAGCTGATTCATTTTGTAAGGGTTTCTTTTCCATAAGGTAGTCTTTTTTAACACAGTCAGAATTAAGCATTTATAT
AGAGCTAGGTATTCCAGATAAATCACGTTAATAGTGTGATTCAAAGAAGACACACTGCTATCTAGGTGGGTCAAAGAAG
TAAACTACTTAGTGGAGGTGGCAAAATAAGAAGTGGTCAGTGGGAAGCTAAACCACCTCTGATTTAGTTATTTAAAACT
CAATGAGAACCCTCTAAGGAAGCACAACTAGGCAGGGGTTTCATCTGAAAGGAATGGTCAGCTACCTGAGCATTATCTC
TAGGTGCACCTTTGTAAAGACTTTCTCCATGTATCTTTCCTACTGGGTGCCACCCTGTGGCTTGGTCCTACGGTAATCA
CACTGCCAGGCATTCTCTACCTCTACAAATCCCTTACTCTTCTAGTCCTAAGGTGCATTCCTGGTTGTGTAATTCACAG
ATTATTATCTCCCTGGAGCTGAGCCTCATCATCTCTATCAGACCAGACTGAGAAGGACTCCTTTTTCCTTTGTCCCGCC
ATCCCAGCTCAGTGCAGAAGGCTTAAGATGCTTTCTCCATCATTTCTAAAGAACAACAGACAAAAATAGAGATCTGGTT
AGGTCTGTTCTTGTGGCGTGAAGTGTTAGGATGAGCTGAACAGCCACAGGGGCTAGAAATGTCAAGAATGCAATACGTT
AGAGCAGGCATTTAGCATTCCTGTCTCTGATATCTACTATTTTATTATGAGTAGTTACCAAAACAAAACAAAACAAACT
GTAAAAGCATTATTTTGTTATAATTAACAACTGCACATTGGATTAAGTGTGATTGAGGGTGGAGTTCACCAGCTTGGGA
AAAAAAATTAACCATTAAAGATTCCCTGAGTGTTTTGCTTTAAAAAGAGATAGCCCAATTACTTTTCTGTGTTTCGTTA
AGAGTCTACTAGTATATGAATCAGTAAGAGCTTCTAGGGTAATATAAAACACACACAAAAAAGCAAATTTGATGTTAGC
AGACAACTTTTTAAAGGTATTCGTGTAACTGAAAAAATCATTTTACGTACATAGGAATGAAATTTTATGTTTACCTAGA
AATATATGTGAAATCCCTCCATTATTGCAAGATCTTTTTCATGTAAATATCAAAAGAATTAGACAGTCTGCATTGTTTA
AAACCAAGATAGCTAGTCTTTTTAATCTATGGGCAACTTGTAATTACGAATAGCAGTAGCTGCCTGGAATAATGTACTG
AGAGCTGCGTTGGTCTCAGAGAAAATGTGCTGTGATCCATTGGTGATCTCTGCCAGACAGAAGAGGGACATAGTGTGGC
TGCTTGCCATTTAAATGGCCTTGATGATCTCATCATAACTCTATATATCTAATCTCACCATTAAATTTGCATGCAAATA
AAGTCATTGTAGCAGAAACAGGTTTTATGCATACATACAAATACATGTGTATTTTTTGATATGTTTTGTCTATTTGTCA
CCTATGAAGAACATATAAATATTGTAAACAGAAAAACTCTTTTTGGATGTTGCAAATGCAAAGAAGAAAAATAAGTAAT
TCTAATTTTCAAAGGTCACCCCTGTAATCACCACCCAGATTAAAAATAGTACCAGCAGCCAAAAGTCACCTTTATGCCC
CTTTAAGCCCCTGCCCCCACCTACTAAAAATAATAGTGATCCTGATTTTGAAAATCACAAACTTTTTAAATTTCCTGCT
TTTGAATTTTATATAAAAGGAATAATATAGCATGTACTCTTTTGTGTTTGGCTGTTTCCCTCACCCCCTTGCAAAATTA
TGTTTGAAAGATGATCCCTTGTTGATGCGGATATGGTTCATTCATTCTCACTTAAGTATAGGTAATTAAGCAAACTTTT
GTTTGAGATACAAATTCAGGGTAAAAATCAGATTTTCTATTTAAATAATAATTTGGTATATATGACTATTTGAGCATTT
TAAACTGTTGTCATTTTACAATAATTATTTTAGTATGATTTAATATCCAAATTCTGTTGCTTAGATTCACCCTCAGTGG
ACATTTCTTCTGAAGGGCCTTCCTAGACTTCCCCAATTAGAATTAAAACTCTCTTCTCTGTGCTGTCATGAAACCTTGT
ACATTTCTCTAACTCTTGAAGGATTACAATTATTGTCTTCTGTCTCACGTACCTCTCCTGTGAGCATGTTTTGGAGTAG
ACTGGGTTTGCTCATCTTTGTAGAGCAATGAACCCCTGTTCCCAGCACCATGCCTGCTCCATCATGGGCATTCAACATC
TGTCCTTTGCATGGAAAGTAGAACAGTGAGTTCTTCCATATTACAAAGAATATTACAGTCAATTTTTATTTTTAATTTT
CTTTTAGTAGATGGCACTTTTCAGGAGATTGTACTGGGTGAGTTGTAGACACAGTAGTTACTCTTTATGGCAAGAGTTG
TATAGTATCCGGGAGGATTTTTGCCTCTTCCCTGTGGCTTTCTTTCACCCTTAGTTTGCCACCACCACTGGCAATTCTA
ATCTAGGCACACCTTCCATTGCCTCCTGTGTTTCCCATTCTAAAATATATACTTCCAAGTTTTCCTCTATATTTTCTGA
CTGCTCGAATGACTCTTCTCGTGTCATAAACTAGTAAAGAGTAGTGCATATAGAAATGCTGATAAATGTGTTGCACATG
GTTATCACCCGACTGACATGCTGACCTTCTGACTCTATCAATGGGTGATTTTTATATGAAGCCAAGAAATCTGTTGGTG
GTAAGTACTAAGACCACCACTTCAGGCTCACTCTAACCTCATTGTGTGCATCTTGAAACCCCACACAGTTGTCACATAT
GAGCAGATTCCACAGGAGGGATGCTGAACCAAAGTGACAAGCTTGTCCTGGAGCCCTAACACAGGGATTGACCCCCGAC
CTTCAAAGTCAGGGAACAACTTAGGGTTGGCTTACCTTCTTGTATTGTGAACTTTTCCGATTGTGAAGCCAGCTTTTAG
CTTTACCACACTCCCAGACTTAAATATTTGGAATGGCAAGAAATTAGGCTTAAAAAAAAAGAAGGAAATTAAGGCTTAA
TCCTTAATAATGAGGAAGTAATTTGTTTTAGTATTGTACAGAAACATTTTCTAGCTACCTGATCATTTAGTCTAGTTCT
ATAGCTTAAAATATATAGTCCTTAAAGAAAAGTTTTATTTCTGTGGGTCTATTAGTTACAAAAGTAAAGGTGCATTTTT
TATTGCTTTATTTAAGTGTTTATTAAGCTTGTTCTGCCACAGGTACCCTGCTGGCTGTTAGAGAGACAATGGTGAAATA
TACAGCACTCGGCTTCATAAAATTTATGGTCTAGTGACTTTCTGAAGTATTTCTATAGGGCAGGAGACTTCTATTTCAC
CTTCTACTATATCCTTGGAATAGTTTTTACTTTCCTGGTAGGAGTGTGCATTTATATAAGTGTTTCAGTTGCTTCCAGA
AATCCAGTGGTAAACAACATAATTTTAAAACCTCCCTACTTGAATTTGGGGTGGAGTAATATAAAATAAATCTGGAATA

Fig. 9.284

TTTGATTTTTTAGACCAAAATACTTTCCCTGGGTTAGAGAGATATTTTCTTTTCTTACTGGCCTGGAAATCCATGCCAT
TTTAATAAGAGATATTTTTATTCTAGGTAAATTGTTTACTTAATCACCTCCTAACAAGGCTGTGTCAGCCAAGTTAAAT
ATTTAAATTTATTTTTATTTAAATAAATTTTAAAACCAACAGATTTCTTTCTCATTTTAATGAATTTAGCCTTTGAGTT
TTCAAAGATAAAATATACAGAGTAGAACATTTTAATGTATCTGTAGAGAGGGAACACAAAAAGGGCACATCAGGAAAAA
ATAGTTGGAAAAAAGTGAATTTTATACAAAATTAACTCATAAAATGAATATAAGGCATTATTTCACTTATTGCCAAAAT
CTGTCTTTACAGATAATCTTCGGGAGACCTTTATTTTTATAGGCCCTAGTTAAAATATTTTTTGAATGCTTGAGGCTCT
ATTTCACTAATAAGAGAAATAAACTTTTTCTTTCTATAAATAACTGCTACTAGCTTGTTTGTCAGCTCTCTAAATAAAC
TCATTTTACTATTACTATGCTTGAGTGCTGTTATATATTCCTTTGTTACTGTGCATAATCCCTGGCTATAACTGCATTA
ATAAGTAAGGCCATTACATCAAATAGGGATCTAACAAAAACTTTCGAATGGACTATCAAAGACCAGATTCAATGCAGGA
AATCAGAAGGAAATGGCATTTATGTCCTAGTGTAGTTCAGTTAAAAGGCCTGCCCTTAAGGATTACAACTGCCATAAAA
GGGCACCATGCAAGAATGGAAAACCTGTTTACAACAAAATATCAAATTATTATCTGACTTTCACAATGAACCACATTAT
TCTATGACTGCCAGTCATACATCTGGACTACTATACCATTTGTGTGCAGTTACAGCAGCTCCAGTTCTATATGGCTAGT
TTTGAACTTAGTCTGACTTTAAAACCCATCCCATTTACTATCCTCTGCTTTTTTTTTTTTTTTGGTGTATATTGTGGGA
AATTCCATAAATGATTTTTATAAACTTTAGCCAGTAATCGGGAAAAACTGTAAGATTTTGTTTGTAAGCTTTATAAACG
TTACTTATAAGATTTTAATTGAATTCTAAATTAATTTCTAATTTGAACCTCTCCCTTCTCTTAGCTTTATATGCTTGGT
CATCCCTCCTTAAGTAATTAGCTTTTTTGAAGCTTTGTTTTTTTTGGTTTTTCACTGTTTCTGTTATATTGACGATTTG
ACTTTCTTATAAATTGTTAGTAATTTCCTGAATAAAGTACAGAAGTTTATCTTTCAAATTTCCCATGGATCATTTCTTA
ATAGTCAAACAATTGTCTAAATTTCCAATACACAAAGAAAAGTTTTAGCTAACTTACTTCAATAAGATGGATAATTTGT
TCAAAGTGCCAAACACATTTGCTTTCGTAATTCATGCCATTTGTGTGTTAAGTGTATAAAAGAGATAGAGAAAGAATAT
AGGAAATGTAACTACACATGCAATCTTGGGCTTTCCAAAATGTTTAAAGTACCAAATTCCCTTGGTGCCAATTGCTTTA
GGCATTTCATCTTCACTCAGTTGCATCCTAAATATAGCGTAGGTGTGACATACCCTGTAAATTTCAAATTCACATAAAG
AAGTCCCAGCCTTCGAGGCAAGTCTTAATTGAATACTAAATAAAAACCTTAGTGTCTTCTGAAATGTTTCTGAATAAAT
AGTTGCTTTACAGTCTTTGATTTCTATGTTCGTTAGTGTCCAAATTCAGAATGGAACCAACTTGGGGAGAAAAAGAAA
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GATAATAGAAAGGGGAGTCCCTTGTGTATCAACTGATGCTGGAATTTGTGAAATCCTATAAAGTTTTGTAGAAAAAAAT
GTTAAATTCATGGAAACTTGTTTGGTCATAATCCTCACAGTTTCTAATTTAGTATAACATCCTGAATAAATTCATTCAG
ACCGACGGAGAGAAGAAATTATTATTTGCAATATGTGAATTTCTGACTAATAGGAGTAATAGAAAATAATTGGTCCCTT
AGGATATTTCTGATTATATATGAGAGGCTTGGGGAGGGACTCTGTGTAACCGTTGCTTTTAACCCTTGTTTTTGATGGG
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CAGGAGTAGGCCAGATGGCCATGTTCTGTATGGCTTTATAAATATTCCTTTTTGTTCCATGTAAAAGTTAATGGCTAGT
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GGAAAACATAGAGCTGAGCTATTAAAATTCCAGGGCAGTTTGGAATTGCCAACAATATGTACTGGAGAGATGGGGGTGG
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AGGGTTTCTGTGAATGTTAAGTGAAATAATACATGGAAAGTGCTTGAAGTAATGGTAGGGACACAGCAAACCAAAAAAA
ATGCTAGCCAGTTTATTATTAGAAGGGAAAAACTCCTATTAATATTTTCTTGTTTATGTTTGTGTTTTCATGTTAGTCT
TAAAACAAGTTACTGTTTGAGAATGTGAGAATTTTAACCATTTACAAAATGGTGTATGATATGACATGTATATGATCTC
TCACAAGTGAAATGATAATGGAAAGTTTACTGAAAATGTCTTAACAGTTCTAGGTAAAACTTAATTTTTCCTTAATTTG
AAAATTAATAAAAGTATGAATTAGATTTAATCTAAATTTATTATTCTGTTAAAGTCACATGAATGTGGAAAAAAATCAG
TATCACTTCTAACTAAATCTGGCCTTGAAACTTCTTTGACATAGTCTTCTTAAAATATATATATCTTATATTCTAAATT
GTATATTATTTAGAAATATGCTATTTCTAAACTGAAATGTCTGATATTTCTAACTGATATATATATCTATATATGATAT
GATATATGATTATATATATGTTATCTATATGATATATAATATATGATATATATTTCTAACTGATATAACAATGTATCTC
AGTTCTTAGAGATATGTAAATTATATTTTAATAGTAGCCTACAAAGATGATACAAGAAGATAAGAAATAAATATACTTT
TATATATAAAATAGTTCAACAGCAAGATTCTTATTTAGAATAATTTTCTACAGTTTTATTTAGGGTAGTTTCTATACAG
AAAAAATACATATTTTATCTCCTTTCTGTGCTAGGCTCTGGAGATGCAATGGTGCCTCCCTCCCTTCCTGGAGCTTACC
AAGCAAAACAAATTCACTAAATAAAATTATTCCTAATTGTGTTTTAAGTCCAGTGAAGAGAACACAGGAGGGACCGAGT
TAAACAGTGTGTTTGTGTATGTCTGTGTATGGGTGTGTGTCTGTGTCTGTGTGTCTCTTTGTGGCTGTGTGTCCTAGAG
ATGTACTTTAGTTGGAGTGGTCAGGGAAGTTGAGAACTGAAAGAACCAGTCAAACAAACATTGGGGAGAAGGGGATTAT
AGCAGGTACAAAGGTCTTGAATATCCAGCAGATATGAGGAGCAGAAAGGCTATCTTTTTCAATCACTTAAAAAGGAAAA
GAAGTGAAAGATTGCTGTCTTAAGAACTTAAATTTATATGGCACTCATGTATAGATTTCCAGTGAAAAGTTGGACAACG
TGAAATGATGGGTTTCCTACCTACAAGTCTCCAGTGTTTGTCTTTGACTGGGGTGTTTTCTGTACATATCTGACCTGAT
TTCTGTTGCTAGCCTGTCTTCCCAGGGGCCTTGGTGAGCCGAGGTCAGAGAGAGTGGACTTCACCTAGGAAAAAAGGAA
AGGCTTCTGACATAAAAGTGCCCTTGAAAATGTTCTGCTGCTGTAAATCCCTTCTCTTTACACAAAGTTTAAGACCCTC
CCAAGAGTTTGACTTGCTAAACTACAAGAGCATTTTTATTAGGTGTAAGATCTCACTTTGACTTTAAGTAGCAAGTGAC
ACACCAGGCAACCCTCGCTGAATTCTCTCTTGCCATAAGTGCATAGATTTCAGTGTTCTAATGCCTCTCTGAGCTAAAT
TTGCCTCTGATCTGAGTTCTAAATGTAATTGGATAGTAGATATATGTGAGTAAAAAAAAATTCTACCAAATGGTTGGAA
TAGTTTTCCCAAAGAATGTAATATTGGCCTTCAGCTGGTAATAGGATGTGCCTGCTGGATGAATGACATGGTTGATGCA
AAAGACAGATGTAAGCCGTGGTTCCCCAAACTGCAGTAGGGATGAGCATGACAGCCACACATATCAAAGGCCAGGTACT
GATATTCTTACTGGAAAGACTGCTCAGGATGTATGTGGTGTTCTTTTTCCTGGCCACCCTTAAGGAGTTTATGAATGGG
TTCCATCAGCTTCAAACAGCAAACACAGTTTGGCCTGTATGAACTGAAACCCATCACACATCATTGCCACGATCATTTT
CCTCATGTATGCAAGTTCTCAAGTATATTTTTGGTCACAAAACAGCAAAATCATGACAAAAGCAACAATAACAACCAAA

Fig. 9.285

AGTAACTAAATACGATTTTTATTTAGTATGAAATGTATTGCATTGTAATTATTTCAACATCATAACATTTATTAAAGAT
GTATGTATCACTTTATTATTCTATGCTCATCCCCCCTCTTTATACAAAATGGAGCATAATCTGCACATTCATTGTTCTG
CAGTTTGTATTTTGCACTTGACAGTATGTTGATACAAAGAGAAGCTACTTGTGTTGCTCTGGAAGAACTTTATTGAGAT
ATAACTCGTATGCCATACTTTTCATCTATAGAGGTTATATAATGTATTGATTTTTAGTATATTTACGTAGTTGTTAGTT
AATATCTACCATTCTTTGACCATAATGAATAACAGGGTTTTCTCTGCACAGATATGTCCATTTAAGTAAAGATGCCAAT
GCAGCTAAATAGAATCACTCAAAAACAACTCCAAAATGAGCCAGGGAGAGTGGAGGGAAGGAAAAGGAGGAATGCATCC
AAACATAGCCCTACGTTCCATGAACACTCAGTAACATCATCAAAACGTGATGCAATTAAATTTTACCAGGTTTACTGCT
GTCCTGATGCTTTCCAATTTTTTTTGACAACAGTTTTGCCTTTTTCAAATTCAAATGGTATAATTGGGGCTTGGTAGTT
GATGTTTATCTTAATTGAAACAGATTCTCTTCATCCTTTTGCTCTGAGACTCCCACTTTGAGGCTGAAAGGTCATTTTA
AATCTGCAGAGCACTCGAGAAGCCACATAATGAATTCAAACAAATTCATGCCTATTAAAAGGAGGCTTCTCTTTCTCAA
CTTCCAGAGCTTACATAGAATAAACCATTTGGTTTTTGTCTGACTTTCTTTTAAAAGGAAGTTATTGTGCTTCCTTTTT
AATGCTCTAACTACAGAGAATGGGGAAATCCTGTTTTCATTTATTCTTATCAGAAAGAAAGTGTATTTTGCTCAGTAAT
TGCAATAAAATACTACTGGGGTTACAGCTACTATACTTGTCAACAAATTTAAGGGATATTCTTTAGCTGCATTACTTTA
AGGATTTCTTGTCTATCTTTTATCTAGCAACTTCATTTTTTAACATTTACTCTATGTACTTGTGTAAAGGTGCAAAAAA
TATATGTACAAAAAATGTTCTGCTGGAGTTTTTGTAACAGAACACTGGAGAAAGCCTAAATGTCAATCGGTATATGGCTG
ATTGAACAACTGATGCACAACTATAAGACAATACTGTGCATCTATGAGGAAGACCTCTCTAGTATGACACTATCTCCAG
ATGACATTTACTATTGTATTATTTTTATACTTTGAAAAGAAGATATGCACACTCCCATGTATCCATTTTCACTAGTTTT
CTTTGTATATACTCTTAGAGTTTATGTAAGTGCAATGAAAACATAAATTCTATTCTCTTCCTCCCTTTTTAAACAAAAA
GAAGTATAATCTGCACATTCATTGTTCTGCAGTTTGTATTTTGCACTTGACAGTGTGTCAATACATAGAGAAGCTTCTT
GTGTTGTTCTGGAAGACCTTTGTTGAGATATAACTCACATACCCTACTCTTCATCAATACAGGGTGTATAATTTCGTGA
TTTTTAGTATATTCACACACTTTTGCAACCGTCACCAAAATCAATGTAGAACATTTTACTACCACTATAAGAAACCCCT
TACCTTATAGTTATCACCCTCCATCTCCCCCATTACCTGCTCCATATCACCTGCCTCCCTTCCACCCCACAGCTCTAGG
CAACGGCTAATCTACGTTTTTTTCCTCTATAATTTGCCTACTCTGAATGTTTCATATAAATGGAATTATATAATATGAG
GTCTTTTGTGACTTGCTTCTTTCACTTAGCATAATGTTTTCAAGTCTCATTCATGTTGTAGCATATATCAGATTTCATT
TTTTAGGACCGAATAATATTCCATTATATGAATATACCACATTTTGCTTATTTATTCATCAGTTGATAGACACTTGCGT
TGTTTCACTTTTTGGCTATTTTGAAATGTGCTGCAATGAACATTTATGCAAAAGATTTTGTGTGTGCATATATTTTCCT
TTCTTCTGGGTATATTCCTAGTAGTGGAATTGCTGGGACAAATGGTAGCTCTAAGTTTAACCTTTTGGTTATTTTCCAG
TGTATCTGCATTCTCATGTTTCTTACAGCAGAAAGTTATTCTCTTGAATGGCTGCATCATTATTGATGTAGTCAAGGTG
TATTTTTAAGTGGAAAAGTTAAGGCACAATGTTCCCAGTTATGGAAAAATATGCTAAGACTGTACATACATAAATATGT
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TTTTCAATTGAAAATTTGATTCATTAATGTAAAGAAGAAGAAATGTAAAAAATAAAAAAGAAGAAGAAGAAGAAATGTA
TTTTCCTGGACTCCTCTGACCAATGTTGGTCAGGCCAGGGGCTTCTTGACCTGTGCTTTGTTTGAGTCATCCGGCACCA
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TTAATGACTGCTTTTCTATCTTTAAGCCAAGACACCATTTAAAAAACAGACATTTAGCTCTTACTCTAAATTAGTGTTT
CTTAAATGTTTTATTCAAATCAATCCACATCAAAAGCAAAATAGGAGGGAAAACTAGGGTAGACATCTGAGTGAACCTT
GGGATTGAGAAATAGGAGGGTGGTATGTGAACTAATCATTAATGGTATTAGCAAATAGAGCTGGGCAGTCTGTCTGAAG
TGCTTCCCAGTTTTTTGTACATTCTTCTCCAAGTATCATGTGTTGGTGACTGGAAGAGGGAGTCTTTACTTTCCGCACA
GTTTCCATCATGTAGCTCTGGAAGGGCTTTGTGTTTGTTCTCATCTTTGCTTGAGAATCAGCTGTCTTATTTTGGGCTT
TTCTATTTTTTAAGACAAAACCTACCTATAGTGGTTATACATGAAACACACCAGTAGATTTGATTTCTGCCTTTGGTTA
AATTAGTTTGCCTTATTAAATGATAGGAAAGAATCAAAATTCGTTTGCCTTATAGATTTGTTCATTCTTATATTCACTC
ATGTATTCATTAAGCATTTATTTATTCAACACTCCTATGACATCACTCCTCACTGAGTGATGATTCCTTCTAGGGTGCC
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TCATTAATGAAAAAAATGCATACATTTTCTTCAATCATCATCTATATCCCATCGTGATAATGAGGAGTACGCTGTGTGT
AGTGACTGTGTTTGCAGGTGGAGGGAGTTTGAGTAATGGAAGTAATAAAGATGCTCCCAGAACAAGTACCGCATCCAAT
TAGCTTGCCAATTAACAATCTATTCCTGAAGTATTTGTTTATGAAGATGATTTTAACTAGAGAGAAGTCATATTTTATT
TTGTTTATATATAAAGATATGTTAATCATAAAATGTATTCCTTTCAAACAGTTATACATTTTTCCTTTGGCAGCACTAT
TGTTTATTTTAAAGGAAAAGACAGTAACTAATCACAGCATTTTTAAAGAAACAAATAGAGATTATGCTGCTGTAAAGCC
AGCATAAAGCCATTTTTCCAAATGTCAACAGAGTTAACAAAGAATTTTATGTTGTAAAAACCTCACAGTTGCCTAGTTT
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ATGATGATGATCTAATTGCAATGCTAAGAACCATGGCTGGGCTACGACTGTGTGTGCACGTTGTTATGCTGGGGAGCAA
GGGTACCTAGGAAAGAAAGCAATAATGAAAGTATCACTTGGGTATTTGTTTATTTCTGGATCTTATTCTATCTGCTCCA
TATTATCACTTTGGCATTTAAAATCTAGATGATGGCTGGGTGGGTGCAGTAGCTCACACCTATAATCCTAACACTCTGG
GAGGCCGAGGTGGGAGGATCACTTGAGTCCAGGAATGTAAGACCAGCCTGGGCAACATAGGAAGACCCTGTCTCTACAA
AAAAATATTTTTAAAAATTCTCCAGGCGTGGTTGCACACACCTGTAGTCCCACCTACTCGAGAGGCTGAGGTGGGAGGA
TTGCTTGAGACTGGGAGGTCAAGGCTGCAGTGAGCTGTGATTGTGCCACTACACTCCAGCCTGGGTGACAGCAAGACCC
CATCTCGGGGAAAAAAAAAACCCAGATGATATGGTTAACCATATTCAGTCATTATTCAGTTATTAGAAAATAAGATTTA
CAAGGCATCCATGGAGGGGAAAACAATTACACACCTGGTTAGTTGGGCTGAGGCTTGCAGAGATAAAATCACCTGCACA
CTGTTGCAGAGCCAGTGCTCCAACCTAGACTTCCGGACACCAAAGCCTATGGCCATTAAGCACTCTGCTGGACTGTATC

Fig. 9.286

TTGGATAGTTTGCTTTATGGGGAACGTAGTACAACTTTACAATACAACTTTAAAAATAAAGTATAGCAGAGTAGCAGTT
TGTCCACAGTCAAATATGAAATATGTAAACATTTCACAGGTTCTTTTTTAATTTTTATTTTAGGTTTGGGGGTACATG
TGAAGGTTTGTTATATGGGTAGACTCATGTCACAGGGGTTGGTTGTACATATTATTTCATCACCCGGGTATTAAGCCCA
AAGCCTAATAGTTATCTTTTCTGCTCCTCTCCTTCTTCCCACCCTCCCTGATCAAGTAGACCCCAATGTCTGTTGTTTC
CTTCTTTGTGTGCCTGAGTTCTCATCATTTAGCTCCCACTTATAAGTGAGAACATGCAGTATTTGGTTTTCTGTTTCTG
TGTTAATTTGCTAAGGATAATAGCCTCCAGGTCTATCCATGTTAAAAGACATGATCTCATTCTTTTTTATGGCTGCATG
GTATTCCTTGGTGTAAATTTACCTCATTCTCTTTGTCTAATCTGTGACTGATGGGTATCTAGGTTGATTCCATGTCGTT
ACTATTGTTAATAGTGCTGGAATGAACATTCGTTTGCCTGTATCTTTATGGTAGAATGATTTATATTCCTCTGGGAATA
TGCCCAGTAATAGGATTGCATGGTCAAACGGTAGTTCTGCTCTTAGCTCTTTGAGGAATTGCCACACTGCTTTCCACAA
TGGTTGAACTAATTTACACTCCCACCAAAAGTTTGTAAGTGTTCCCTTTTCTCTACAACCTTGCTAGCATCTGTTATTT
TTTGTCTTTTTAATAATAGCCATTATGACTGGTATGAGATGGTATCTTGTGGTTTTGATTTGCATTTCTCTAATAATCA
GTGTTATTAAGGGTTTTTTCATATGCTTGTTGGCCGCATGTATGTCTTCTTTTGAAAAGTGTCTGTTCATGTCTTTTGC
CCACCTTTTAATGGGGTTGTTTGTTTTCCTCTTCTAAATTTGTTTAAGTTCCTTATAGATGCAGGATATTTGACCTTTG
CCAGATATATAGTTTGCAAATATTTTCTCCCATTCTGTAGGTTGTCTGTTTAACTCTGTTGATAGTTTCTTTGGCTGTG
CAGAAGCTTTTAAGTTTATTTAGATCCCACTTGTCAATTTTTGCTTTTATTGTGATTGCTTTTGGTGTCTTTGTCATGA
ATCTTTGCCTGCTGCTATGTTCAGGATGGGATTGCCTAGGTCATCTTCCAGGGTTTCTATAGTTTTGGGTTTTATATTT
AAGTCTTTAATCCATCTTGAATTTTTTTGTGTGTATGGTGAAAGGAAGGGGTCCAGCTTCAATCTTCTGCATATGGGTA
GCCAGTTATCCCAGCACCATTTATTGAATAGGGAGTGTTTTCTCCATTGCTTTTCTTTAGCTTTGTCGAAGATCAGATG
GTCCTAGGTGTGCAGTTTTATTTCTGAGCTCTCTATTCTGATCCATTGGTCTATCTGGCTGTTCTTGTACCAGTACCAT
GCTGTTATGGTTACTGTATCCTTGTATTATAGTTTGAAGTTGGGCAAGGTGATGCCTCCAGCTTTGTTATTTTTTATTA
GAATTGCCTTGGCTATTCGGGCTCTTTTTGGTTCCATATGAATTTTAAAAAGTTTTTTCTAGTTCTGTATTTCACAGCT
TCTAACTACATTCTATTGTTGGACATCTTTATATTTTATCCAAATAGGAAAACATTAATTTAAAATTCTTGTCATATAA
TCTACAAAATATTTATATTCAAGGCACAATGACCCTTACATATTCTTTTTTTCTTTTCTTTCTTTCTTTTTTTTTTTTT
CGAGGCAGGATCTTGCTCTGTTACCCAAGCTGGAGTGCAGTAGCTCAATCACAGCTCATTGCAGCTTTGACCTCCCATG
CTTAAGCGATACTCCCACCTCAACCTCATGAGTAGCTGCAACAACAGGCGTGCCCCACCACTCCTGGCTTGTTTTTTTT
AATTTTTTTTGTTTTTTTTTTTGTAGAGACAGTGTCTCCCTATGTTGCCCAAGCTGGATTCAAACAATCTGCCTGCCTC
AGCCTCCCAAAGTGCTTGGATTACAGGTATGAACCACCATGCCCAGCCCTTAAAATAGTTTTTATTATAAAGGCAATTT
ATGTGCATTCTAGGTTTCTTTAAAAACCTAGCAAGAGGCCAGGCATGGTGGAATGCCAGAAATCCCAGCACTTTGGGAG
GCCAAAGTGAGAGGACTGCTTGAAGCCTAGAAATAGAGACCAGCCTGGCAACAAAGCAAGGCCCTGTCTCTACAAAAAA
TAAAAAATAAAAATTATTTTTTTATGGTGTGTCCCTGTAGTACCAGCTCTCAAGAGGCTGAGGTGGGAGGATTGTGTTC
AGGGTGCAGTGAGCCATGATTGCACCACTGCACTCCACCCTGGGTGATGGAACAAGACTCTTAAACATACACACACACA
TATACACACACACACAATACGACACACGTATAGAAAAAAATAAAAATACAAATATAAATTTCTCATAACCTCAACACACT
CCCAAATAATCACTGCTAATTCTTAGTTATTTTCTTCTATTCTTTTTCCAAGCAAGTATGATACTAATAGCAATTACCT
GGATTGTACAGTTTTAATTTCTTTTTTTAATTTAGCATTTTATCATGAGCATTTTTCCATATCACTTAACATTATTTCA
AACATTACTTATATGGATACAAAATGTTTCACCCTAAAAAGATTTTGTAACTTATGTATTTGCCAATTATTGGATATTC
AGGCTGTTTCTAGCTTTTCCCAATTATTAAAATTATCAGCAAGGAACATCTTTGAACTGAAACATTGGCTTATCTCTGA
ATATTTCCTTAGTAAAATAACTATGTCAAAGAATATGACTATTTTAAGACTATTAATATATGTTGCAAAAAATACTTCT
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AGCAGAGGCTGATGGGACTGGGTGGTAGGTGGGTAAGGTGGCAGATAGATGCAAGAGCAGGAACCACTCACCAGGCACT
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GGAAGATAAGCACAGGGAATTAAAGCAGAAGCCAGTAGTAATCAGAGATAAGACGTATGTTCAAGTTAACTGCAGCAGG
ATGGTGTGGTGCTGGGCTCCTGAATCTGTTTCTGCCTAAAGTCATATCTGTAAAGATCAAGGAGGAGGAGCCAGAGCAG
CAGGTGAGGTTCAAGTGATTAATAACACTGGAAAGGAGAACAGGTTGCAGAAACTATGGCTCAGGCTACCTATTCAGCC
ATTTTCATTTTTTGTAATGCAAGTGCCTATTACATAATCAAGGGTATCCTTAGTAACATATGAAGCCTACATTCTATTT
CCATTTTTAAAAAGTTCACCAGTAAACAATTGTACAGCAAATTTTATCAATGTAAAAAGCCATTGTACTCTATCCAGTC

Fig. 9.287

AAACCATATTCACCTCTCCTAAAGTGCCCATTACGGAGGCTCTGGGAAATTGAAGTTGCCCTTAATCTTGAGTTACAAT
GGGCAGGGCCTCTTTTTTTCTCTAAATTTACTCAATAAATGCAGGCTTCCTATGCATTAAATGGTGCCCACAAACATT
GAAACTACTAGCTCACCTCCTGAAATTCAGCACTTTACTATGTGTCTTTCAATGTAAGAGCATTCACTAATTTAACAAG
CATTACATAACATGTGTCATTAATGAGTTCAGTTAGCTAGGCCATGGAATAGATATTCCTGTAAATCAACTCCTTTACA
GTTACTAACTGACTTAGTTTCATGGCAGAGGCATTTATTTCAATTAGACTGTGGTTCCTGTTGAGATAAAATGAGATCA
ACTATGTGACATGATTTTGAAAACCATATTATATTGGTGCATGAATGTATATGTGTGTGGGTGTAGGTAGTTTACAGAC
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TCTGACAAAGTAGTAAAATAGTCTCACTTCATCTGGATAAAGATCACCATCTGGAACTATAAAAATTGCAATGATTCCA
AATTGTTGAATAGTTGGATTGCATATTTACTTTTCAGTAGTATGTTGGCATGCATGTAGATCCAGCCTTCCTTTCAACA
AAGAACAGTGGTGGAAGATTCCCTTAAATGGTTACTCTTTCCTCAATAAGAGCAACCATATAAAAATTATAGAACTATT
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CATGTCTGTGAGCCTAACACGGCTCCCAGAAGGAAAAAATATGCCTCAAGGAGGCTTATATGATATTGCTTATTTAGGG
AACCTTTGACCACTTATTTACAATATCCAGTTACAGCTGTGCTACTTTCCTTTTTGGGCAAAAGCACATATTCGCTTGA
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GATCAATTCAGAAGTTGAGTCCTCTGTTGAAATGATTTCAATAGTTGAGGTGATTTTACTGTTTCTCTTTAATGTTGTG
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CTGTGAAATTCATACTGCTCAGACACTGGTTCTCCAACTGTGATGTACGTAAGAAATACTGTGCCTGCTGTCTCTTAAA
TGTAGAGTCCTGATCTTCATCCCTAAGACCCTGATTCATTTGCTTTAGATAACACTGAGAGCTAATCATTTTTAGCAAG
CATCCCAGGTAATTCTAAGGCCATATTGTGAGAAAAGCCAGTATAACGATGGAGAATTCTTATGTTGATGCTCTGACAC
TGGCTCTACATCTGTCCATAATTTATTTAACTCCTCTCTGCCTCAGTTTCCTTATCTATAAAGGAGGAAAGGAAATGCC
AGTCTCTTCCACCTGGGATTCTTGTGAGATTAAATGAAATAAGCCATGCAAATGATTTAACACAGTCTACAGCACACAG

Fig. 9.288

TAAATACTCAATAAATGTGAACTCATTATCGTTACTGTTGTCATTGGTATTCATATTGATATCATTATTCCTGCATTGG
AAAATGTAAATGTACAATTTTAAGTGATTAGCATTGCTGGTGGATTATTGATTGCAATTTGTCCTGCTGTCTCTTCTGA
CATTGCTAAATTTCATTTACTTAAATATTTCCCTTATTTTTCTCTTGTTCCCACCCATGCACCCCAGTGGAGTTGAAAT
TGAGTTGAGATCAAATGCAGCAGGTGTTGCTCAGAGAATTTGGTAAGACTAGTTGAAAAAAGATCAGTGAAACTTTATC
AAAAATAGAATAGTGATTCTCCTGGTCACCTGCTTAGAGAACCCATTAAGAAGTGTGAGGTTCTCCAGGCCACCATAGA
GCTATAATCTGCACCTTGTATCAGCCATAGCAGGTATTTGCACAGTAAATTTCCCCTCACCTAGTTTATTCATAGGTCT
GATCATAGCACACTACAGACTCAAACTCCTGGGCTCAAGTGATCCTCCAATGTCAGCTTCTTGAGTAGCTGGGACTACA
TGTGTGGGCCACCATGCCTGACCATGGAGTTCTTAAAAATGGATATTGACATACATATATAGAAAATTCATTCAATAAA
TAGTTATCACTTTCCTATACCTGGTGTGAGAATTATGCTAGATATTGGAAATACAGAAATGAATATATTAATATTAAAG
TCACTTAACTAAGCTTTTCCCTGTGATAATCTTTCTGAAACAAAGCAAAATGATACAGAATTCTTTAAGTACTATTCAA
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GATTTGGCTAAAGAATCTACTTTGACCAAAATAGGATACCTTAAAATACAACATCAGCAAAATATGTGTAAAATCCCCA
GAGAAAAGCCCTCTTAAATGCCTACTTATTTCAAGTCAAATTTAGTTAAACTACATAACTTAGTCCCCTGAGTGTCAGT
GGAATTTCTCCCAGAGCTGTGACTTCGTCAAGTAAAGTTACCCTCTCTCTTGACCTTTGGAAAGAGATGGCATTTGTTG
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AGCCTTTTCTTACACCTAGAACTTTGTAAAGAATATGTCAGGAATAGGACAATCACCTTTTAAGGCTCAGACAGCCAAG
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AAAGCCCTTAGCTTAATCACTAGGCTATACTGAACTTTATGGAATTACATCCAAAAGGGATGTGTGTGTGTGTGTGTGT
GTGTGTGTGTTTGTGAATTTTTCCGAAGACTCACATTTCCAAAGATTTATAAGTCATGTCGTTCTCAAAGGGGTCTCTG
GTCTCCAAAATTTGAAACTCTTTGCAACAGGGTGGCTATGTTTTAGAATGACATAAACAGATACAATGTTCTCCAGAGT
CCAGAGCAGGGTCTAAACCTATTGGGATACTATACTTGTGTTATCAACTGAACCACTTGGTTAGTTCACTAGGAAGATC
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TAAAATAATGGTCCTAGAGTCAAAATAATAACAGAACTTTGTTCTGATGGAGACTGTAAATATACCAATACTCCCATTA
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AACTCTGTTCTAGGTGCTTTCACATTCATTAACTCATTTAATATGTGAGTGCTTTGTAATCCTTTTTGAGTGTTGCAG
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CAAAGTGCATGTAGTTTTTGCCACAGTACGATGCTTGGGGAGCTAAATGGCATTTGGGAACCTAGAGTTAAAGCATCAG
TATTTTTTACTAAGGGGCCATTGGATCCTAGAGAGGCAACGAATTATAATGGATAAAAATACAAATTTCAGGCAAGTTA
CTTCTCTTAGCACCATTGCTTTATCCGGCATAGTAATAAAAATCAAATGAGACAATGGATATGAAATGCTAAAAATAGT
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TGTCCAGGAATTCAGAGGCAGAGAGCAGGGTTGAGGAGAATTTCACAGGTGGTAAGATCTCCGGTGAGGAGGCATTTCA
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AGCTTCAGGAGAAGGCATAGTTCTATCAACAGACAGCAGTACAGCACCAATAGTTAAACCCTATATGGTAGATTTAAAT
GCTGAGCCTTCAAAATCATTTGCCTGTTTTACTTTAGCTCCAGCAAAGGGATAGAGAAACCCTTCTTCTGTCATCCCTC
TCCCATGTTTGCTGTTGCTTAAGCAGTATTTATTTTGGTAACAAGAATACCTGGCCTTGCCACTTAATCTCCACCATTC
CAAAGAAAACCTTTCTGAGATCATCTTAACGTTGTCTCTAGGCAATAAATATCTCTGGTTTCTAGTTATTCCCAAGGAC
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TATGAGAGAGATTGTTACATCTTGCTTGATGTTTTGACATTATAGGTAGTGTAGGTTTTGTTATTACAGTTTGACTTTT
GAAATGCGTATGAGATTTCTCAGGTGAAATAGAGCCTTTGATGTGGTACTCAAAAGGGATAACTATGACTCAGAGGAAC
CATTTCTAAAAGATGGCACTCTTTCTCCTTCCAGTTCTTTCTGTTCAATAGTAGGGCTGGGGAAAGGCAGAGGCAGTTT
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GTTCTCATGTATTCTTCAAATGCTCATCTAATTACTGTTACCTACTATTCCAAATGCAAATGACAAGGTCCCAGTTTAC
TGTTGATCCTATATTACAAGAGTCATCAATTTTGGTTGAGAAACACAAAGGACAAATATCTCATTATTGTGCTAACCAT
GCCTATTATTAGTTTTGTGCCCCCATAACATAAGTAATAGCCCCAAATACATGGCACTTATCACACACCAGGCATAATT
CTAAATGGCATGTTCTCCATGTTATGGAAGAAGAGACTGAGGCATGGAGAGAGTGAGTAACTTGGCCAAACTCACAAGG
CTACAAAGGCAGAGAATCAGGTTTTGAACTCAGGGCTGCCTAGACCCTGTGTTCTTAACTATCATCATATAGTGTCTCT
CTTACTGTTTCTCACTGAAGATGAGAGAGGATTAAAATCTCAGGAATAAATGTAACCTCCACAGGTAGGCTTATGCATA
AAATTCAGATGCAATGAATAACAAAATGACTGCCTCCCACAAAATTAAGAAGCAAACATATAATGAGGACTTACTCTGT

Fig. 9.289

GCACACACTGGTGAGGACACGTTACACATTTCATATCACTGAGTTCACACACACACACACACACACACACACACACACA
CACACCTATATGAGGGCAGTATGATTTCCCCATGTGATAAAGAAGGAAAGGGAAGCTCAGACAGATTAGATATATTGTC
TGACATTGTTCAGATAGCAAGAAGCAGATTCAAGATGCAAGCATAGACCAGAGACCATTATTTGAGACCATGAGGCCTT
TTCTCACCAGTTATTCATTCACTTAATATTAATCACTTAATATGCATTTGCTGAGCACCTGTCGATGTCTTGTAAATCA
GTGCAGGAAAATCATAAGATTTGAAATCACAGCATCTAGGTTCATATCTCAGCTTCATCATTAACCAGCAAACCAGTAA
ACCTCCCTGTTTGCAGTTTCATTATCAATAAAATGGGTTGACAAAAAATTTATTTAACAGAAATGTTATGAAATGCAAA
TAAAATAATGGATGTAAAGAAATTGGCAAATGGTCAAGCAAAACATGAATGTTAATTTTATGATGATTAAAGTAAATGG
TATGGAGACCCCCAACCTCAAATAGCTGGGAAGGGGTAGTTGATAAGGGGAGAAATGTGTTTAAAGCCAGTTGCTTTAT
TATTTTAACCCTGAGATAATGCTTTATTGACAGTGTGAATAAGATGTTTGGAATTGTGGAAGGAAGAACTGGAGGTCAT
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ATGAGCTGAGTTCAGTGCTGTCCAGTTGGAATTGGGAATGTTAAAGCTAGAAGGTCAGCAAGTCCGGTGTTCTCAACCT
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ATCCAAAAGGAGGCCTAAGAATCTGTATTTTTAAAAGCCTCTCCAAAGTGATATGTAGCAGTAATTGAAAAGGACAATC
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CCTATGTTCTCTACTTGGGTGACAAGATAATTAGAAGCCCAAACCTCAGCTTCCTGCAATATAGCCATGTAACAAAACT
GTGCATGGACCCCTGGATCTAAAATTTAAAAATCAATAAATAATACAAAAGAAATACATTCATATTTTTCTGAAATATT
CTTCAGAATATCAAGTGGGAATCCCTTTGTTTTGCAAAGCTGGTCTGATATGTTTAAGTAAATTTAACCAGATAGTTGT
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AGAGTACCAAAATGAAGGACTCTTGCTAAAATCCTTTTCCAGCTTTTTCATTCTACTATTTACAGACATGTAAGCACAT
CCATTCATTTCAGCAAAATGTAACATTCCACACAAAGGTTTTGAACATTGTGCTCGGCTAGAGAATATTTCTAGTGAGT
GCTCATAAGAGACATTAAAATAAGCATTTGTCTTTCATTCAAGCTTTATGAAGGATTAAAAGTAATCCAATTGTTCAAT
CCTTCATTTAAATCTTTAGTCCAAAGAACAGAAGATTTGGGATTGAGTCGTAATCCAGCCATTTAAATCTATGAGACTC
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GGGCACAGATGGAACTCTTTTTGGACATGGCAAGTGGGTAAAGCACCCAAGGTGCCCTGAGAGATTTTTTTCATGTGGT
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AGCTCTGTAGGAAGAAGCCAAGAGCAGAATAAGCATAGATGTGGTTTGGATTTTATTTTTCCTCTTGTCAAATTTAACT
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CACTCTGTAATTCTCAAAGACTATTTTCAAAATTTGGTCAAATTAAATTTCAAAGGTCAGCAAAGTATATAATCATGTT
TGGGTTCTTTTTTCCCCCAAGTTTAAAAAACTGACATCTATCCTTTTTTTAGGCTATCTGAATGTATGAAAAAAGAGTA
GAAGTTATTTTACAGCATATATTTTTCTGTAAAAGTAACTACATTTAACATTAAATTATTTACCAGTGGTATTCATTTT
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GCCAGCAATCAAAAGAATTACAATTGCTACTAGGAAACACTAAATCTGAGGATTCTGTCATGACTATGTATAGCTGGTT
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ATCGAATAAATTCTACAAAAAAAGAAAAAAGAAAGACAAAATACACATAATTGAATATCATAATCTATCTAGAAAATAG
ATGAAGTGGCACAAAAATGGATGAATATATTCAAATGTTTGAGAAATATTACTTCATAAAAATGAGAGAAATTTTAATG
GCTGGAGAAGTAAAACTTGATTTTTTATTTGAGAACATAGTTAATGTCAAAACAAAGAAAGTCAGCAATGAACATTGCT
TCTCAACTTGAGGTGATTAGAGAAGAGGTCAAATGCCTTTAGAAAACAGCTGTGCATTTATCTTGGCTGTGGACCTGGC
AAGTCAACAGGATTTATGAATAGCCTCACCATGAATTTGGTCATCCTGAGGGGAAGGAAAACCCCAAATTAATTTTGGA
GCAGAAGATCAGTGTAACTACTACCATCCTTACGTCTTCTCAATGAGCTTCATTATTCCTCCCAGAGTGGCTAGAGTAG
GTAGTTGATGAGCATTTGTGGAATGGATAGGTATCTCTTTTCTATGACCTACTCTATCACCCTCAGGATCTATTAATCC
TTTGAGTTTGATCTCTAAGGTGGCAATGAAATATTTCTTACACCAGAAATACACTGAAACTCAGAGAAAGAGGGCTCAA
ATTTGAGGAGAGTGCTATACTGGCAAGAGGATGCCCCAGGTAATATCCTTTCCTTCTTCTAGAGAGGAACATTTGGCTC
TAGAAAGGCATTTAGCCTATGAGTTCAGAACAGGAATGGTCTTAGGCATCTGATTCAACCTACGACATTGCCAGTCTGA
ACCAACTCATCCTGATCCCACTGCAAATGAGCTAGGCAACAGTGAAGAGTGGTTCTAGTCTGGGTTTGGATAAATTGTG
AAATATTTCTAGAATTTTTCTATAGACTCTGAACCATTTCCCCAGAAGTGTGCACATTCAAAATGTCATTTTGCTTCAG
AATAACATTTTGAATAAGGCAAGCCTAATTTTTGTTTTTTAACAGAATTTTAAAATAATTAATTCACAATATTTGTACA
TAGGATAATGGGATATTTTGTTACATAAATAGGATGTATAATGACCGAGACAAATTATTTAGGGTATCCAGCACCTTGG
GCATTTATCATTTCTATGTAGTGGAATAATTTCAATTTCTTTCTTCTGGCTATTTTGAAATATATGATACATTATTCTT
AACTATAATCTCCCTATTCTGCTATCACACATTGTAACTTATTTCTTCTATCCAGCTGTATGTTTGCATACGTTAGCCA

Fig. 9.290

ACCTCTCTTCATTCCCCTCCTCCTGGTAGCTATCATTCTATTACCTTCATGATATCAACTTTTTTTAGCACCCACTTAT
GAGTGAGAACATGCCATATTTGTGTTTCTATGCCTGGCTTATTTCACTTAACATTCAGGTCAATTCATGTTGCTGCAAA
TGGCAGGATTTTGCTCTTTTTATGACTGCATAGTATTCCATTGTATGTGTATGTGTGTGTGTATATATATATATATATG
TATTTTCTCTATCGGTTTGTTTGTTGGTGGATACTTTGGTTGATTCCATATCTTAGCTATTGTAGATAGTACTGCAATA
AACATAGGGGTTCAGGTATCCCTTTGATATACAGATTTCCTTTCCTTTCCTTTAGATAAACACCCAGTAGGGGGATTGC
TGGATTGTATAATAGTTCTACTTTTAGTTTTCTGGAAATCTCTATGCTGTTTTCCATAATGGCCATATTAATTTATAT
TCCCACCAACTAAGAATTCCCTTTTCTCCACTTCCTCACCAGCATCTATTTTTTTTTTTTTTTGGTCTTTTAATAATAGC
CATTCTAAGGTAAGATACCTCACTGTGGTTTTGATTTATAGTTCCCTGATGATTAGTAATGTTGAGTACTTTTTACATA
CCTGTTGGTCATTTTACATCTTCTTTTGAGAAATGTCTTCATGTCCTTTGTCCACTTTTTGATGGGATTATTTGGGTTT
GGTTTGGTTTTGTTTTTGCTGTTAACTTGAGTTCTTGGCATATTCTGGATATTAGTCCGTTGTCAGATATATATATTTTGC
AAATATTTTCTCCCATTTAACATGTTGTCTTTTCACTCTGTTGATTATTTTCTTTGCTATGTAGAGATTTTTGGTTTTA
ATATAGTCCCATTTGCCTGTTTTTGTTTTTGTTGCAATGCTTTGACGTCTTAAGGGAAGCCTATTTCGATCTGGTACTT
CTGAAATCTCATTGGCTCAAGTGAAGCACGGGTGTAAATCCTGAGTGTTTGTTAATCTCGGTTCTGTGTGTCTTCTGTA
ATCCAGAGACAAATTCATGTGTCAGGTTCACACTTGAGCTGATCCTCTGTAACTTTGCTGATTGTTGTTAAGACAGAAC
AGAACCAGACTGGCTTTCACTTTACACAACAATCACAACTGTGTGTAATGATTATAGACTTATTCTCTAACATCTCTTA
AGCACTTAGGTAATGAGAAATGTCATAATGAAAATATCTGTTAACCGAGGAAGATCAAGGGAACAAAACAAAAAAACCTA
AATGAAGTGTGAAGGTGGTAGAAGTAAAGACATAGATGGTTTCACTTGGGCCAGAGATAGATTGAATGTGAGACATTTG
AAAGTCTAATGTACTTTCAGTACGTACTTTCCAGTTTACTTTGATGGAACGCACTGTGTTGAATGTTATTGTGCTGACA
AATAAGCCCCCAAATTAAATGACTTAAAAAATAAACTCATTCTTCATCAAGTAGCGTTCTAGGATGGTGTTTAGGAGGA
TGTGGCAGCTCTCCTTGCTCTCAGTCACGGACCAGGATTCTCCCACCTTCTGTTTCTACCATCCTTCACGCATCAGCAT
CTTTAGCATCCAGCTGGCAGAAAAAGAACATCAAGATAGGCATGTGGGAGGAGCTATGAGCCAGTCCTGAAAGTGGCAT
GCAATATTTCTGCTCACATCTAGTCACTTGGCCAAATCTAATTGCAAGGGAACGAGAACTTCTTTTATGCCCAGGAACA
GGCAGAGAATGGAATATGGCAGACAACAAGCAGAATTTCCTATACTCACAGTCCTGATTATTGACTTCTATGCTTTCCC
AAGGTCATTTTGTCTTCAGCCAGATTCCATTTCAAGGAAACATGAAAATGTTTCTTCACTCTATAAAATCATTGTTGAA
GTAGATCCTGCTACCTCTGTGGTAGCCCATCCAACATCTTAAAACTTTTAAAAGATAATTTGTAACCATACATAATTCA
CCCAATATAAGAAATCATGAGAGAAAGCTAATCTCAGTGTACTTATTATACAATGAGACACATAATGAGACATATCTTT
TTTTATTCTCCACTATATATTTTAAAAGAATTGAAGAGGCAAGTGATTGTTTATGGCCATCGTAAGATAATATTCTTAT
CATTGCTTTGCCCAGTAAGATTGAAAAAATTGTCTGTAATTCAGGCCACACAACCCTCTGAAGCCCTTCGCCATTCATT
CAAGCCCCATTAAGGCAGAAAACCCATCTGTTTGGATTGTTGAGGTTGGAAACTGAATAATATCACTTCTCCAAAATAG
ATTTAATAGTAGGGCTGGTGAATGGTTTCCTGACCTGTTTGATGCAGAGTGCAAACCCAGAGGAAAAACATGGTATATG
AGTTTTCGTATCCATTAGTCTAAAAGAATCAGAATTCGGTTATATTTTAAAGGCAATTATAGTAGAACTATTACTTTTT
TGTTTTCTGTTATAATCTTACCTAGACTTATTTAACATACTTAACACATAATATTTTAAGGCTAAGTATTTCTACAAAG
GATTTATCATTCAATCATTCTTATTTAGTCAATAAAATCTTTTGGAGATTAATTTTTAGTAAGCCTAAATACCCAAATA
GCCAGGAATGTGATTGAGGATCACATTTTTAAAACCCATCCCTCAAAAAGAAAATTGTAATATCTTGAGAGACAGGTAT
GGTTTGAAGATCACCCCTCTTCAAAGTGAGTTCAATATCTGACCTAATGGAATCACTCCCCATTCCCCAGGACTAGGTG
ACACTCACTGATCTGGGAAAAAATAAACACGTGCAACTAACAAGAGAAATTTTGAGAATTATGAGTAAGCTTTGAAAATT
TGGGTACTGAAAATAGAGAGGGAGGGAGAGAGGGAGGTGATAGGGAGGGAGGGAAAGAATAAAAAGGAATGAAGAAAAA
ACTAATAACAATTTATCTCTTAAGAAAATAGAAGGTGCAGCTGGGTACGGTGGCTCACGCCTATAATCCCAGCACTTTG
GGAGGCCGAGGCAGGCGGATCGCCTGAGGTCGGGAGTTCGAGACCAGCCTGACCAACATGGAGAAACCCCAAATACAAA
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GGCGGAGGTTGCAGTGAGCCGAGATCGCACCATTGCACTCCAGCCTGCACAACAAGAGCAAAACTCCATCTCAGAAAAC
ACATAATTAATTAAGTAATGATATAAGGTGCTAAATTTTTATTTTCACCCATCCAGTTTCTTTTCTTATTCTTTCCTGA
TATGTAATTACCTCAGATGCAGATCTGAGGTGAAACTAATGAAGATCAAGCTAAGAGCTTCTCACTGGCCTGGTTCCCT
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ATTATTTTTCTGAAAGCAGACCCTTATAATTGTATAATCTTCGTGTACCACAAAACCTTGATCCCACCCCTGATTGCAT
GGCTGACTGCTGTTCAAACAGAAGGATATTCAAAATAACCCCCGTTAAAATGCCTTCTTAGAGATGTTCCAGATTATTT
CTTCAAATGTGCTAATCAATCTCATTAACCTATTTCTTTAAATAAGTGACCAACTCCTAGCTAAATTAAAAAATAGTTA
TGAAGTTTATTTAAAGTAGAACTACACAGATAACCATGGTAAATGATAACCGGTATAGAAAAAGTACCGCTGCGTCTAA
AGATACCCATGTATTCACGATACAAATATTTATTGAGCAACTCGTACGTGTGAGGCACTGTTGTACCTGCTGGGGGACA
CATTAACGAACAAAGTAGATTTTTAAAAAAAAATCTCTGCACTTGTGGAGCTTATATTCTAATGGGGTGAGTAAGATGA
TAAAATAAGTAAAAAACAAAGTTCATCAGAAGCTGTTAAATGCGATGGAGAAAAATTAAGAGTAAGGAAGGTTTTTTGT
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GGTAACATTGAGCTGATATCTCTAGAAAGAATATGCCAGGCAAAGAGAACTGCAAATCCAAAGGCCCTGGGGAGGGAGT
ATGCACAGTGCTTCAAGGACAGCTAGGGACCAAGAGGCTGAGCAGAGTGAACAAGAGGGAGAGATGTAGGTAAAGATGA
GATTAGAGAGGCACCAGGGACCAGGTCACTGAGGGCCTTAAACCATTGGGAGAACGTAGTATTTTCTCTGAATAAAATA
GGACACCATTATGGGATAATGAGTAGGAACTTGCCGAGAATGGGCTTACATTTTAGGAGGATCGCTCTGTCTGCAATAT
AAAGAATAAATGTGGGTGGGTGGCTGGAGAAGTAGCAGGGCACATCATTAAAATATCAATGTTTCAAAGTCGGCTTATT
AAATCAATTTTACTTGCTCTATGTCATAGAAACAATAAATAAAGACAGAAACACCCCGCAACACTACCTTGGGTATTTT
TCTTTGCTTGCTTGTTTTTTTTTTTTGTTGTTGTTGTTAATATTTTAACTTTTATTTTAGGTTTAGGGTTACATGTGCA
GGTTTGTTATATAGGTAAACTTGTGACCCCGGGGGTTTGGTATACATATTATTTGTCACCCAGGTGCTAAGCATAGTA
CCTGACAGTTAGTATTTTTTTTCTGATCCTCTTCTCTCCTCCCACCCTCCATCCTCAAGTTGGCCCCAGTGTCTATTGT

Fig. 9.291

TCCTCTCTTTCTGTCTGTGTGTTCTCATTATTTGGTTACCACTTATAAGTGAAAACATGCAGTATTTGGTTTTCTTTTC
CTGCATTAGTTTGCTAAAAATAATAGCCTGTAGCTCCATCCATGTTCCTACAAAGAACATGATCTCATTCCTTTTTATG
GCTGCATAGTTTTCCATGGTATATATGTACCAGATTTTTCTTTATCCAATCTATCATTCATGGACATTTAGTTTGATTC
CATGTCTTTGTGATTGTGAATAGGGCTGTAATTAACACATGCATGCACGTATCTTTATGGTAGAATGATTTATATTCCT
TTTGGTATATACCCTGTAGTTTGATTGCTGAGTTGAATGGTAGTTCTGTTTTTAGTTCTTTCAGGAATCACCACACTGC
TTTCCACAATGGTTGAACTATTAATAATTTACATTCTAACCAGTAGTATATAAGCGTTTCCTTTTCTCTGCAACCTTGC
CAGCATCTGTTATTTTTTGACTTTTTAGTAATAGCCATTCTGACTGGTATGAAATGGTATCTCACTGTGGTTTTGATTT
GTATTTCTTTAATGATTAGTGATATTGAGCATTTTTTCATACACTTATTGGCCATATGTATGCCTTCTTTTGAAAAATG
TTCATGTCCTTTGCCCACTTTTTAATGGGGCGGTTTGGTTTTTGCTTGAATGTTCGTTTAATTTCGTTGTAGATTCTGG
GTATTAGACTTTTGTCAGGTAATACAATTTACAAACATTTTCTCCCATTCTGTAGGTTATCTGTTTACTCTCTGTTAAT
AGTTGTGTTTTTTTTTCCTGTGCAGAAGCTCTTTAGTTTAATTAAGTTCCATTTGTCAATTTTTGCTTTTGTTGCAATT
GCTTTTGGCATTTTTATCATGAAATCTTTGCCAGTTCCTATGTTCAAAGTGGTATTTATTTGGTTATCTTCCAGGGTTT
TTATACCTTTAGCTTTTACATTTAGGTCTTTAATCCATCTTGAGCCCCACTTTGTTAACAAGACGCTATTCCTCTTTGG
ACTTTAGCTTGATGAAGCCACATTTTGAGAAAGAGTGCATTTTGGAAATATAGCATCTTAGAAGTGATCTTAGAAAGTG
AAAGATTGGTAGTAACCTGCTGTGAGCAGTACAAGGAAAATAAAACTGAGTTATTCCTGTGGGACTACAGCTGACTCTC
AGGTCCAGCCTGGCCTGGAGAGCATGTGCTTTTCTGCTCTTCCCTCCATACTCTTAGTTAGTGGTCAGCACATGATAAT
AGGATGTAAGGGAAGAAATAAATCTCTACTTGTTTTATTCTCAATCACAGTGACACCTGCATGAAATTGCCAGAGAAAT
TAAGGCCTCCCAATGACTACCAAAAAAAAAGACACTTTCCGCTTCCCATTGTCAGCACGTATTCTGATTGAATGTATAT
GTTTACTACTTGAAGTTCTCATGATTTCTAGGTAATTACTGCAAATATGGACCTCATACTGCTACTGCAGGCTTTGCCT
CAAGAGTCCAAATACCATGGCCTCATGTTAGGGCCATTTGAGATCCTTTTTGAAAAAGTTGCTTTATTGTGCTAAAAAC
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ACAGCATATCTCTAGAATTTATTCATCTTGCATGATTAAATGATACACATTGAACAACAACTCTCCATTTCTCCCTCCA
CCCAGGCCCAGCAACCACCATGCTACTTCCTGCTTCTATGAGTTCAACTACTTTAAATCCCTCATATAAGAGGGATCAT
GCAATATTTATCTTTCTGTGACTGACTTATTTCACTTGGCATAATGTCCTCAAAATTCATCCATGTTGTAGCATATGAC
AGGATATCCTTCTTTTAAGGCTAAATAATATTCCATTGTATGTATATACCACATTTTTTAATCCATTCGTTCATTGATG
GATATTTAGATTGTTTCCACATCTTGGTATTGTGAATATACATAAATGAATATGGGAATATAAATATCTCTTTGACATG
CTGATCTCAATTTTTTGGATAAATACCCAGAAGTTGAATTGGTAGATCATATGGTAGTTCTGTTTTTAATTTTTTGAGG
AACTTCCATACTGTTTTTTATAGTAGTGGCATCACTTTACAGTCCCACCATCAGTACATAAGGATTCCAATTTCTGTAT
GTCCTTGCCAACAGGTTTTTTTTTTTAATAATGGCCATCCTAACAGGAGTGAAGCAATATCTCATTGTGGTTTTCCTTT
GCATTTCCTTAATGATTAGTGAGGTTGAGCATCTTTTCATATCCCTGTTTGCCATTTTTTGTCTTCTTTGGAGAAACGT
CCATTTCTTTCATTGGGTTTTTTTAATTTTGAGGGGTTTCAATTGGGTTTTGGGGGGGTTTTGCTATTGAGTTGTAGGA
GCTCCTATGTATTGTAGATATTAATACCATATCAGATATATGGTTTGCAAATGTTTTCTCCTAATCTGTAGGTTGTATT
TTCACTGTGTTTTCTCCCTTGCTGTGCAGAAACATTTTATTTTGATGTAGTCCCACTTGCCTATTTTTGCTTTTTTTGC
TTATGCTTTGATGCTGCTGTGGATTAGGAAACTTAATATTGTTAAAATGTCCACAATGTCCAATGTAATCTCCATCAAA
ATCCCAATGGTATTTTTTATAGAAATAGAAAAGCAGTCTTCATAAGAAACCACAAAAGGCTGAATAGTCAAAACAATCT
TGAAAAAGAACAAAATATCTGGAGATCTCACACTTCCTGATTTCAAAACATATTACTAAGTGACAGTAATCAAAACAAT
GTGGTACTGGCATAAAGACAGACATAAAACCAATAGAACAGAATAGAGCCAAGAAATAAACTCACACATACACAGTCAA
CTGATCTTTGACAAGGATGTCCAGAATATACAATGAAGAAAAGTCTTGAATGGTATTGGAAAATGGTATTGGGGAAACT
AGATATTCACATGCAAAAGAATGAAACTAAACCTTTATCTTAAATCATACACAAAAAATCCACTCAAGACTTAATTATA
ACACCTGAAGCTGTAAACCTAGAAGAAAATTTAGGGGGAAAATTTCATGGCATTGGTCTTGGCAATAATTTGAGATGCT
TTCTTAGAGAGAGTTTCAGTTAAGAAAATTTTTCTTAACAGTCATTAAAAAGTAATGTATAAACTTCAAGTAAAACAAT
TTTTGGTTGGGGCTTTCTGGTTGCCTTAGTCAACTCAGGCCGCATAACAAAGTACCCTAGACTGGTGGCCTAAACAGAA
ATGTTCTCACAATTCTGGATGCTGAGAAGTCCAAGACCAAGATTGGCTGATTTGGTTCCTGTTGAGGGCTCTCTTCCTA
CATACAGATGGCTGCTTTCTCACTCTGTCCTCACATGGTGAAGAGAGAATGCTCTTGTGTCTCTCTCTGTTCTTATAAG
AACACCAGCACTATTGGATTAGGGCCTCATCCATATGGCCTCGTTTAACATATGAATTCTAGGGGAAACAAGATAGATT
TAACCTCAACCTCAACCTCATGTAACCATTGGTGATTAAGGCTTCAACATATGAATTATAGGGGAAACAAGATTCAGTC
CATAACACTGGCCTAATAAATACTTTTCAGAAAAATTGGCCTTTTATCATATCATTGTGTCAAAAGTGTGCTAAGCAAG
TCCAGCTTATCCTCTTTCATTTATAGTCCAGACATCAAACTCATGCTATCATTTCCATCTTGAATCTCTTTATTGCCCT
GTGTTACTTGGGAGTGTCACTGACAAGCCAGAAACATATGTTGTATATTTCCAGTACCACCTAATGTTTTACTCATAAG
TAAGCATATACCCTTCATCTTTGTACCAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTATGTGTGTGTGTATG
ACAGGATCTCACTGTGTTACCCAGACTGGAGCGCAGTGGCATGATTTAGACTCACTGAAGCCTCAGCCTCCTGGGCTCA
AGTGATTCTCCTGCCTCAGCACCACAGGCTTGTGCCATCATCGTGCCTGACTTTTTTTTTTTTTTTTTTTTTTTTTTGT
AGAAACAGGGTTTCATCATGTTGCCCAGGCTGGTCTTGAACTCCTGAGCTCAAGCAATCCACTCCCCTTAGCCTCCCAA
AGTTCTGGGATTACAAGTGTGAGCCACCATGCCCAGCCCTGGGCTTTTGTTTATAAAAATCATCTGTGAAAACAAAGGG
TAAAACGTGTCTGTTAAATATCTTAACTCTGTGCAAATATATATATTATACAAGCTAACATGTGTAGTATAATTTAGCT
GTGTAATCTTGTAAAGTAGCTAAATATCATGCCTTCTCCGGGTATCCTACTTAAATTTAATATGCAGTTTTATGATTGA
TTGGGAAAGATTGCCATCTGTGCATATCACTGTAAAATGCTAGTTTCTACAGTCTCATCTCCATAGATAATCAGAGAAA
AGTAAATATTAAAATGGTGAATTTTGCAAATCATTATTTTGTTTACTTCAGAGAAGCTATTTGACCTGCAGGGAAATTT
TCAATAGAGAAGTATCAGTGGCATTGATTAGAAACGAGCTTCATAACCTTGTGATATTGATAACAATGGGTAAAATATT
TAGTATTATAAAGAGGGAAAAATGTATGTAGTCATCCAGTTACAGTTACTCTCCCCTTAAGCTCAAGGGTAAGCCTCCC
CTCCCCTTGAGGGCAAAGCATCAAAATGAGTTCCAATGTGTTGGCTAACAGCATGAGCTACAATACACAGGGGAGAGTG

Fig. 9.292

GAGTACAGGAATATAAACATCAGTATAATTGTGACCTGAGGTCCCCAAGCTACACCCTGTGTCTGGAGACCTGAGGTCT
GAAGGACTGTTTCTGCTCATTATATTCAGCTGGAGCCCCACCTAGGTTGTTGGGACCTCCAAGCCTTCCACACTTCCTG
GTAGGAAATTATTCTTTCTCCTCAGTGAGTAATATCTAGAAAAAAATCAGCAGTCTCCACCCTCCCCAGATGTTATCAC
ACTGGAATTATGGAGTTGGGTGGAGACATAAAAGCAGCTGAAACTTTTAGAGCAATCTGGCTCCAGCATCTGTCACCTC
ATTGATTGCAAGGGCTGATTCAGGTGATTTGGCCCTCAGTTCTCTTCCTCTTTCATCTCTCCCTTTAGGTTCTTCCCAA
AGCCATGTGTTCAAATAAAGTTAAAGAGAATGACCTAGATGAAGATCTCCCTGGGAGAAAAAGAGTAATAAAAATGAAA
AACAATAGCTGCTAAATAATGGGAGTGTACTAGCTGCCAGGCAATGTGGTGAATGCTTTCCAAACATTTTCTCTTCTAA
TCCTTATAATGGCCCTAGAGCTAGGTATTGTAATTATCTTTATCAGCAGTGAAAGCCTAGAAAATACAGCAACTTGCCC
TAGAGCACCCAAATAGGAAGTGGCTGAACCAAGATTTCAAATTTAACCTGTGTTTTCTAACTCTTAAATAAACATCTTA
ACAGGAACATTTTTGGTAGGTCAATATTTTCTATGTGCCATTGTTCTTACTATGTAGTGAAAAAGGCAGCTTTCAGATG
GTCCTGGCTTCAGTGATGGCTCCCAGGATTCCCAGCGACATTCAGCAAGATCTTCCCTGTGAGTGGCCTTCATAGATGC
TTCGGTAATGGAGGCTGCTATTGATAGAGGTTCCTTAGCAGCTGCTCCACTGAGGCCCTCATTGCCCCACCCACTTTGG
GCTTCATACTGGGGGTCAGTGCTAAGTATAAGGTCCTGATGGCTAGGATAGATGAGGAAAGCTATTTACTCAGCACAGT
AGCAGGACTCTGGCTCAGGAGAGGGCCCATATCATGGTCAAAAATAAATTGGGAAAAGTTTAAACTAGGGAAGCAGTGT
CTAGCAAAAGGCCAAAAAGATGAGAAATGACCTTCAGCAGACAAACAATTACAAGGTCAGTAGACACAAAGTATGCGAG
CAGTTGAGAGCGTGGATGAAAGGTAGATTGGAACTGTATTACCATCCAGTAATTCCACTGAAATGGAACAGTGTGGAGA
ACTGGGAGTAATTAGTTCATTCGTCAGTTTGTCCGACTTCTCTTTGTTTCTTGKAGGGGGCTGGTTCCATAGAAAAGGA
TGGGTCTGTGGAGTAAATGGTCATGAGTAGTGCTAGCCACACACATTCTTTAACACTTCTGAATGCAGCAGGCCAGCTG
GTCATTACTGTTACTGCCCCCTCATGGGAGACCAAATATAGCTATATCATTCCTCCTCCAAAACTGCCTTCTGGCAAAA
GTTATCTCTTTTAAGAATTGTGTGCATTCTTAAATTGCATTAAGGGAAGCAAACATATGGAACAAGAAAGCACCTCACT
TAGTTCCATTTGCTAAGCCCTTTTGCAGACCCACTGACCCTTCCTTAATTCCAAATGAAATCTCAAATGCTATAAAGAA
ACCCGCCAAATGGGTTACAGCAAAGACTTTTTTACACCCTACTGTTATGTTCAGAATTGGAAAAAGCTGGGGATTTGGC
AAATTCCAAAATGTTGGGTCATATGAAAACTTTTTTTTTTGAGACAGAGTCTCGCTCTGTCGCCCAAGCTGGAGTGCAG
TGACGTAATCATGGCTCACTTCAGCCTCGACCTCCTTAGTTCAGGTGATCCTCCTGCCTCCACCTCTGGGTAGCTGGG
ACTACAGATAAGCACCACCACACCCAGGTAATTTTAAAATTTTTTGTAAAGATGGTGTTTCACCATGTTGCCCAGGCTG
GCCCTGAACTCCTGGGCTCAAGCAGTTCACCAGCCTTGGCTTCCTAAAGTGCTGGGATTATAGGCATGAGCCACCACAC
CCAGCCCCATACGAAAATTTAGTCTCAGAATTAGCCTTTGCATGCGTCACCTGTAAGTTAATCAGAATGTTACTTTCAA
AAGTTCCMTGCAGGTGAGGAAGCTAAAAGGTATTCTTGTATTTTTTTAAATGAAACTTCATAATAGAGGTGTAAACAGA
GTCCATTCTCCCCAGCCTTAGAATCAGACAGCTTGAGTTTAAAACCCACTTATGAGCTTGAGCATACTACTGAACATAG
AGTCACTTGTCTATGCCTCAGAGTCCCCATGGTCGAATGGAAAATACAGTGCCTACTTCAAAGTGTTATTGTGAGGATT
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ATAACACCACGATGTGGACTATTGATAAAATTATGTTTCAAAGATAACTAGCTTATTTGAAGCCATCTATAATTTCAGC
CCAAACTGACTAATTAGGCTAACTTTCAGAAAGTTAAGTAAGTGTCTAATTCTCAGTTAACTTACTACCTACTGAGTAA
AAATGTGCTGCCTTTTAAAATCCACAACTAACCTCCCTACTCAAGGCAAACCCCCTAGTTCTAATATTTGAAGTATTTA
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CTTTCTTTTTTTTTTTTTTTTTTTTTTTTTTGAGACAGAGTCATGCTCTGTCGCCTAGATTGGAGTGCAGTGACACGATC
AGTCACTGTAACCTTGAACTCCTGGTCTGAAGCGATCCTCCCACGTGTGCCTCTAAAGTGTCGGGATTACAGGCATGAG
CTACTGTGCTCAGCCTCTACTCTGTTTTCTACCTTTTATTTGTTGCAAAAGCAACATGTTTATTTTAACAAATACTGGT
CTTCCTCATCTTACTCCCCTGAGATTTCAATGTTAAAAGTTGATTTGTGTGTTTCCACGTAAGTCTTTATAACAAGCTT
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TTTATAGGTCCCCACTATTCTTTAATACCAAGCCTCAAATTTAGCCAGACACTAAATGTCCTGTTTTATATACACGCCT
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ACATAGTCTGATTGCCTATATAATACAATTTCGTGTTTTAGTATTTATATGCTATTTAATACAGATGCCACCTGTTTTG
CTGCTTTTATTTCTCTGGTTGCTTGATGTTCTATTACCTTRACTAGACTTTAGTGCTTTCTAGAAAAGGACAATGTGT
AGTATATCTGTACTTATTCAAGTGCTGATCTAAGGACATAGGATGTAATGTAAAAGTTTATTCAATGACTATTTCAAAA
TACAAAGTCTCTCTTTGTATAAAGTCATTCACTAATACTGACATTGGCTGATACTTCAGACTGGAGATTCTCGGTAATA
TTACTTTTTCTTGATAATTAATTTTGATTATAMGAGGATTTAATATCATGGAAATAAATTATGCAAATGAACTCAGACC
CTAGGTTCACTTCCCAGAACAAACCGTATTCTGAGAATACTTGTGGTGCCAAAATTTAGAGTGAAACCCCAGACTATTA
ATGATGCTCAAGTTACTTTACTCCAACACAATAAGTACTCAGTGATTTGTTACRGAAATTCAATTAAGTCTTCTCAAGT
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TATGTATACATGTGCCATGCTGGTGCACTGCACCCACTAACTCGTCATCTAGCATTAGGTATATCTCCCAGTGCTATCC
CTCCCCCCTCCCCCCACCCCACAACAGTCCCCAGAGTGTGATATTCCCCTTCCTGTGTCCATGTGATCTCATTGTTCAA
TTCCCACCTATGAGTGAGAATATGCGGTGTTTGGTTTTTTGTTCTTGCGATAGTTTACTGAGAATGATGATTTCCAATT
TCATCCATGTCCCTACAAAGGACATGAACTCATCATTTAAGAAAAAGTCCAATAAAATATCAGTCACTATTTTTAGATC
TTCATTCTCAATGTTTGTAAAGCTAATACTAATATTAGATTAATGTAATTTTATCAATATTGATAATTACTTAGTATAC
ATTGTGAACTTTGTTTTTTGGATGTCATTTAAAGGGTTATTTTCATGAGTTCCTAAGAAATAATTTAGGCCTTTAAGGT
TATTTAACCCTTCAGTAGAAAATAGTTTCCTTGTTTAAGAAAATGATCTCCATCTAGTGGACAAATTTTTATATTACAG

Fig. 9.293

TATACAAAGAAAAATATTAAAGCCCCTAGAATATCTCATATCAAGCACTTCCTGACCTATTAATAAATGTTTTGGTTTT
AGTGCTAATATTATGGCTTAAAAGTTGTAAGATTTAAAAATATCATAACTATCTAAATGACTTAAGGTATTTAGCAATA
TTTGTTTCAAAACTTATAGTGGAGTGTTAAGACTTGCTTGATTTAATTGGAAAAATTATAATTAAAGAAAAAATTACTG
ATTTATACAAATTTGGTGTTTACTCAGTTGAACTGAAAAAAACTAAACCAAAACTCACACTTCTGTATCTCTTACATTT
CTGTTCATGCACAGGAAGGAGGGGGTATTTTCTTTTTTAAAGTGTAGCAATAAGAATATCTTGATATTAAAGGGAAATA
AACATAAACATTTCTACAGGCATTCACATTACTAGGTCCTCCTCATGCTGAAAAGCTGCCATGACTATCTTCTTAGAAG
AGAAATCTACTTTGCCAAACCCCCACTATTTAGAAGTTTTTAATGTCTTCCAGTTGTGTACTAAATACCTTCAAAAACC
TTCTTAAATACTACTCTTCATGAAAACTTCTCAGATATCCCAGCCTGAGTTAGTCATTCATCCTTTATTTTTGTATCTT
AATGCACTCATATTAAGTGCTTAATAAATGCCTATTTAAGCATATCCAAGGAGAGTTTGCCAAAGATCCCTAATGTATG
TCTATTGAATGATTAGAGACCATCCTCCCCTTCCAGCCTTCCTGGGAATTGACAAGGTTTCACATACATATGTGCCTAT
CCTATTCTGGTGAAACAGATGTCCCCTGTTTGGGTGCCACATATATTTGTGGTTTATATAATCATGCAGTAGAGCTGGA
AGGACTTTAGGAACAATCGATGATTCAATGCAGTTAGCTCAGTGACTGGTCAATTAACTTTTCTAGGACCTGGTATCCT
CGTCTGTAAAGTGAGTCTGTTCGACTTGACAATCTCTCATTGTCCTTCCTGAACCAAATAAATATATCTATAAAGAGAC
ACAATTCTAAGAAAATTTTAAGTTGGAAAAACATATTTACAGCTGCTCAAGATAATGAGTTTTCCCTCTTCTGTTTATT
TGATGGATTATTTCGGAGCCACTGTTATTTGATCACAGATTCWAAAGTGATCCATGAAACATCTTCCAATCTTAGAGTC
ATAACTCTATTTATTAATGACTCCGATAAAGAAAATAAAGGAATGTTTTAAAATGAGCTAGTTAATAGTTTGAATAAAG
ATTCTAATGGGGAAAATATTAATGACAGCAAAACTTGAATTCACATGTTTATTTATTCTTTCAACAAGTTTTTCTTTAA
AACCACACACCTGCTGGGCTATCATAAGCTATCACCCTCCTCTCCTAAGAACACATGAAAGTTGACTTTATTTTAATAC
TGGTTGATGTTTCACTAGAAAGGTTCTTTGTGGAAAGTTTATCTAGATTATAAGGACTATGACGTTAAGAACTGTGTGT
GTAGATTTTTTCCCAGCTCTAAAATATGTATTGCTGAGCACAGTGCCTTTTATTCATTTAATCATTTACTCAAGACACT
TGGGCACAGTTTTCAATGTGCCAAGAATACGCTGAGTCTCCATTTGTAGAGAGCTCACAATCTAGGAATGGAGACCGGG
TGAAAAACATTTTCAATTCATTGTAAATTCTGTCATTAGGGAGTGGGAAAGTGTCTTGGGAGCGTAGAGAAAGGGCCTT
TCATAAAGCTCTGATGTACCAGGGTAGCCTTTCAGGTGCAGGCTAAGTCTCAAGGATGAGTGACAGTTAGGCAGGGGAA
AGGGGATTTGATTATTTAGGGGAGCAGGAGGTGAGGTGGTGATGGCCTGTGAGAAGGAGATAGTGCCTCAATATGAGTT
GAGCAAGAAGTACCCAATAGCTGAGGATGGCAAGTTGAGGCTGGGGGCAACTAATTGCAATTGAGAGCAGATGGTTAGA
CTGGCAGTCTGGCAAAGAAATTTTGACTTCATCCTGAGAGCAATGGTAAGTTACTGAAGGGTTTTAAACTGAAGAATGA
CACTGGAAAATGGATTCAAGACACTAATATAAAGGTTGTTATAATAATATAGGTGAAATTTGATGGAGACCTGAATTTA
AAATATTGGTAGTAGGGATGGAAGGAAGTGGGTACAATAGAAATTAATGCTTGGATGGATGTTATAGGGYAGGAGTGTG
GAGGGAGAAGCCCAGGTTTGGGAGAACAGCATTAGGCACAAAATGGGTATTTGTTGAATCGAATTCAAATATTTGATGA
ATTACTGTGTATTTGTTATTTTCCGAAAGGAATTTTGTACTTAGAAGATTATGTTTTGCAGAGTGTTTCCCTTTTAACT
GAAGTAGAGTTTGGAAAAACCTGTATCTTGTATCTGGTCAGTTAACAACAGTATCCAGGAGAACAAGAATGTGAAGTCA
ATGTGTTTTTCTTTTATGTATTTCAATATTATCATATTTTTATGGCAGAAATTAGCTGTAATTTTCATTCCTGCTAATT
CCACTGTCAGTTCCTCAGCTGACGCTAAATGCTTTTTGAAAATATGAACATGTGAATGTTCACAGCAACATAATTCCTT
CTCCTTCCTTTACAGTTTTGATGTGGACAATGGCACATCTGCGGGACGGAGTCCCTTGGATCCCATGACCAGCCCAGGA
TCCGGGCTAATTCTCCAAGCAAATTTTGTCCACAGTCAACGACGGGAGTCCTTCCTGTATCGATCCGACAGCGATTATG
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AACCGAGTAAATTTATATCTAGAGCTGATGACATAATAAAACTAATGACTTTTGTTCAACTGTATCACTCTCCTCCAAT
GTAGAAAGAATATGAATAAAATTATACAAGCTAGAAATGAATGGTAGATTTAACCTGAGTGCACTGTCACTCTTGATTA
ACACACACACACACACACACACACACACACACACACACGCATGTATTTATTTTCCCAGAAAATACTTTATAGGAAAACTGA
GAATTAAATTTTTAATGGAAACTAACACTTAAATCATTAGCTTATATTTATGTAGAGCCTGAGTTTTAGCTACCTAACT
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AATATATTTCAATTAATGTATGTACAGATGTTAGCACTGGTTTGCCAGATCATTTAAGAAATCTTTGTGGGACTTTGCC
AAAATTAAACCAACTTTTAAGGATCATGAGAGGCAAGCACAGAAAACATTAGACAGACTTGAATATCATTTAAGATATA
GTACAGCTTGAAAAACAATGAAAACTGACAAGCAGGTTTGCAGATCCTGTACCATCACTAGCTCATTTTCTCAGTGCAT
TTCATTCTTGTGGTAGTGTGCATGTTTTTCTACATAGGTCTTTATTCTCACTCAATACCTATACTATCATTCGTGGCAC
ATCTGCCTCTGTATAGAATCGATCTTCATCTTTCTCTCTTGGTCTATACATTTGTCCAATAACATTCACCATCTTTTCA
TGACACCCATCTCAAAAACTCATAACAGGCTGCAATTTATCTTATAAGAATTAGTCTGTATGGAACCCCTGAGTGTCTA
GTGTTATTCTTGCCATTCTAACAGAGCATCAGTTGTATTGCAATAGGTCTACATGGGGTTCTAGAAATGAAATTATATT
TCACTCATTTTTACAAACTATGGTTGCTATTTTAGCAGTTGTATTATTGACGTCTACCCTTCTTCATCTCTAAACAACT
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ATTCACACATAATGAGAATGCTTCTTGAGCAAATATGGTGTATTTAAAGCTCTGAATCTGTGGAGCAGTGAGGTCTGGC
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ATGGAGAGTTTTCCACCCAAGGGAAAGATACAGAAAATACCGGGCTAAGGGAACAACATTTACTAAATGTGAGGCATGG
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TACAGTCTATGGGACCTGAGAGCCACAGAGGTTTTTAGCTGAGTTTTGGCATGATCATATTCTTGTTTTTATTGCATCT
TGATTACTCTATTGTTGAATGATTGCATAGCGAAGTCACTACAGGGAAGTATTTCATGTCGAAATTCACAGAAGTAAGG
CAGGCTAAATATGATGAAGACCTAAGTCAAGGGAGTGATGGCAGTGGAGCAAAGAGCTGGTTTAGATGCAAGAGGCTTA
TAGAATGGTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGAAGTATGTATGTATGTTGGGGGAC
AGCCAGTGGAGAAGGAGARTCAAAGAGAGTGCTGATTTTTGTCCATGAATGAGTACGTACATGGTGATGTACGTACATG
GTGATGAGGAACAAAGGGCAGAGAGTAGAAAACATGACAGATAACAGGTGATGAATTGGTTTGTACATGATAAGGCTAG
GGGAAACAAGACAACAGTTAAAGTACTGGGACAGCAAACAGAAATAACAGTCCAGAGGACCAGGAGAAATAGAACAGTT

Fig. 9.294

ACCTTCTATAATTACTAGGTTTTTGAATGACAGTTGAGTGGTGCGTTGTATTCAGGTAATAGCATTAGGAGCCCCTGGG
TTAAGGAGTGAATTGAAAGTGGAAATGTGAGCAAATGCAGGCATCTCTTTAAAAGGCTGATGGGTGGAGTAGGAAGAAA
GAACTAAGGCTGCCTGACAGAGAATTAGGTTCAAGCGGAATTTTTTTGAATTCAGGTTACTTGAGCTGAGGGAAGGCTC
CAGGAGATAGAAAGAGACTAAAAATTCAAGGGGAAAGAGGGTTTAAAGATGGAGCTGTAGTTGCTGACAAAAACATGAT
CATGAGCCAAAGTAAGGAGGCTATCCTTGGAAAAGTAGTAAATACCAGAACTGTATTCTTTAGGAAGGACAAAGAAGAC
CTGCCTTGGCAACATAGTGAGACCTTGTCCTTACTAAAAATCCAAAAAAATAGCTGGGCATGGTGGCACATGCCTTTAG
TCCCAGCTACTCTGGAGAGGTAGGAGGATTGGTTGAGCCTGGGAGTTCAGGGTTGCAGTGAGCTACGATCATGCCACTG
CAGTCCAGCCTGGGTGACAGAGGAAGACAAGACTGTGTCTGGAAAAAAAGAAAAAAAGAAGAAGGAGGAGAAGGAGAAG
AATAAGAGAGAAGAGAAGAAGGAGAAGGAGAAGAAGAGTAAAAGAAGGGAAATGTAAATTTAGAGATGGAGGAGTAAAA
TGTTAAGAGATATTAGCCATGAGTTCTCTAAACATTTTACTCCTCCATCTCCAGATGAATGAATGTAAAAGTAGAAGGT
ACAGCCATCAATAGCCAGAGGAGAGAGGGATGGGGCAGCTTGAGAAGAAAGGGAAAGGCTTAAAAAAGCCACTATGCAG
ATCAAAAAAGGGAACAGGGTAAAGGTGAGTAGAATACTGACCAGCCCCATAGATAACAATAAACAATGTTAAATAGGCG
AATGACAGAATTGAAAGTCATCTAATGCAACTTCATCAAAGGTGAGTCAGGCTTGGTATTGACAAAAGAAAGAGGAAAA
CTCACAGTGAGTTAGTGGAGTCCATTTATGTAGTTATGTGTTCTACCTTTTTAAATTGTAGTAAACTGAGTTTGGGATA
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CTTTATCTGATCAGACTCAGGTAGGAATGATGAGTTTAATCAGACCATGAGTCAACACTATATTTTGCTGAAAAGTAAT
GTGTWGATATGTTTAGCTTTCCATTCTCCTTGGATATTTACATTGGAGCAGTAAGATATTCCTTTGATACCAACTCCTA
GAAAGCATTCTTTCTACCAAGGAGATTAAGTTTCTGTGGAAGGAAAAGGAAATAGAATAAATAATAACTATTTCAACAT
TTAATCTGACACGACACATATCTTCCACCATAAAGGACTGTGCCTTCTCTTAATTTGAATTCTCATATGGCCATGTGTA
AACTTTAATTTTCTCACCTTACCTAGTTCACAATAATGCTATGAAGACTGTCTGATGTGTATAATTCAACTGCGCTTTA
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TCTTAGAAATTTCAAATACAAACAGTACCTAATGAGGATAGGTACCTAATGAAGGGTATTTAAAATGAAGGTTTGTGGT
TATCTATTTAATTGAACTGTTTTGGAAAACCTTTAAATACTCTTTAAGTTTAAATATAACTATTTACTCTATTGGGAAA
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CATTAAACCAATGAAATACATAGCAGTATCAAAATTTGATTAAGAATAAAATAAAAGCTCAAGGAGGTACAAAGTAAAT
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TGCATTACCATTAATAGTAAAAATTTTTTATAACAGTAGAAACAACTAGATAACAAAAGGCTGGTTGCCCAAGTGGTGT
CATGAAGTAACATGAAGAAAATTACAGCGTAAATAGACAATATTTTTGTCATCTTAATATTTCAGCATCTGAATAACAA
TCACTTCTGTGTTTTCACATCATCCAGTAATATAGTATCTGTATTTGGAAACACATAAAGTTATGATACATTGCAAAGA
TTAAGAGGAGAATTAGCAATGACAAGATAAGTAGAATTAAGTCACAAAACTATGAATTTATTAAGTATAAGTTACCTGT
CAAACTACTTAAGTTTTAAGAAATACTCAATTCACCTGGATAACTAATCCTCTATTCCCCATCCTCTGTTAAATTAACA
CCAACACATAGAATGCAAAGATGATCCAATCGGCTCTTCACTCACATTCATATACATTGCTTCTACACACAGAATATGG
GGTGGGGTGAATGCATTCAGAGGGCCAGTGACGAGGAAGTGAGTAGATTTGATATACCATAAAAAGCTGGGGCATATTT
GGGAATCTAGCTAAGTTATCCCCAGGCACTATACAGATATCTCAGACCTCACTGATCAGGCCTTCGGGGTGCCCCATTG
GGGCATTTTCTCAGCTAGTAGATAATACTCTCCCTACCTCCCATGTCAAACTACTGTCCTTTCTTTAGCAATTAACAAG
TCCCTCACCACTTCTTGGGCCTCTAATGTGTGTTTTCAGTCACAGCCACTCCTCTCTACTACTTTTGCCTGCTAAGTAT
AAGAGTAGTATTGCTTCCAGTCCTGAGTTTGAAAAAGGAAGAAGAATTCCCTTTATGTCAATTTGTATCTTTTATTCCA
GATTATTAATCTTCCCTGGTCTCACTAGGAAGAATATAAATAAAAAGACACGTTGCATTACAAAGGTTCTAATTCTCAC
TGGATCTACATGAAAAGTTTGTAGTCATCTCTTACCTAGATTGCAAGATAATATTACACTAATGAACATTTCAAAAGCA
TATCAATTTGTTATCTTGAAAGCTTTCTTCCATTAACCACAGAAAGAAAGCTACCATGGCCAAATCATCTCTTCCCCAG
TTCTGGGTTTTTCCCAGCTGGGGAGGTATCCTCACCCCTCACCCTGTGGTGTAGGAGTGATGGGACTAGGGCCAGAGTT
CTCAAAATGTGTCCTGAGGCAACAGAGGGAATGTACATGGGTGCAAGCGTTATTTTAAATGTTCAAGAAAAACACGAAA
ACATCTGTCAACCACCTGGAAAACTAATAGCTTGGAATAGTTCCCAGTTTCCAATTAAGACCATGATATTCCTTTCTGT
GACACCATATCTTTGCAAAATTGGGTTTTCAGCAGTTGCTGGATAAAAATGAAGTGCTGAGCAGAAATCAATGTGCAAC
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AACAAAACCTTATTAAGTTATTTGGACTTAACTATTTAATAATTGGAACTATTATTTATTTTGGCCAATGTGTTGCTGT
TATTAAAAAATTGAGATATTAAGGGCACCATGTACTGAGAAAGTCTGAAAATATTTGGATTAGTTGTTTATTCATATCT
GAAGAATTAGAGCTAAATCAGGCTAGGCATGGTGGCTCACATCTGTAATCCTGGCAATTTGGGAGGCCAAGGCAGGCAG
ATGGCTTGAGCTGAGGAGTTTGAGACCAACTTGGGCAACATGGTGAAACCCTGTCTCTACAAAAAATACAAAAATTTGC
TGGGCATGGTGGTGGGCGCCTGTAGTCTCAGCTACTTGGGAGGCTGAAGCAGGAGGATCACTTGAACCCAGGATGTTGA
GGTTGTAGTGAGCCACGATTGAGCCACTGCACTCCAGCCTGGATGACAGAGTGAGACCCTGCCTCAAGACAAAAAAAAA
TGATTAAAGATAAATCAGATCTCTATGTGAGACTATTTGAGAGAATTTTGTTAGGAGTTAAAAAAATAACAGTTTCCAA
GCTGTGAAGTATCTGATGTGCTCTAGAGTAGAGAATTTATCTTTTTCTTAATTCTGTTAGGATCCCAGGTAGCCAAAAT
CTTTTTTTATAAAATGTGATATTATTTGGTAATGACCTAGATAGACCAGGCTTTTTCTTCCATTGCTGTGTGCTGGCC

Fig. 9.295

ACTGTTACTAGTATTATTCGGAGTGTTGATGCAGGCATTAATACTAGCTATTAAATCTCAAGAAGTTTATTGGCAAAAT
ATGCTAAGGTCATCTGCTACTAGAATACCTTTTTACTATCTTTTTGTTTAAAAATTCTGCTTTATTTGGTGCCATTTAT
TCAATCACTTAAGTCATTTTATTTCTGATTTAAAAAAATGGGAGTTTCATGAATTGTAAAATAAGTCTTATAAATTAGC
TAAACAWGTTTCTTCAATCCTTGAACTGGGGGATTTAAAATATTAGCTGAATAGGCATTTTATATTCCTAATCTCATAC
TTTCAAAAAAATCATAAAAATGAAATCCTGATGTTTAGACATTTTAAATGGTAATGTTTTTAATGCCACAGTATAAAAA
TAAAGCATTGATTTTAATGCACTGCTACAGTGAGATGGTGCCAGCACCTCTAAGTATCATTGCCAGTGCTCTAACCTTT
AAAATAACGAATTAATTGAGTTATATGTAGTAATATATCTTGGCTATTACTGCCAAAGTAATAGATATATACTGAAGTC
TTAGGAGAGATAGAGGGATAAATGTTAGTYATAAAAAGTTGTTAAAGCAGAGGGAAAAAGAAGTGAAAACTGACCAAAC
ATATACGTAATTCATTGTTTCTATGACAAGCCTGCTGCAATTCGAACTCTAGGACTTTGTGCTAATATTTAGCATACCA
TTTTATTTTCTAGATTTCCTTTATACTCACTATGTTCCTCAGTATTTGCACTCACTTCTTTTGTTTGTTTGTTTTGAGA
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GCGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGTACCTGCCACCGTGCCTGGCTGATTGTGTTTTTTTT
TTTACTTTTAGTAGAGATGGGGTTTCACCATGTTGACCAGGCTGGGCTCGAACTCCTGACCTCAAGTGATCCTCCCACC
TTGGCCTCCCAAAGTGCTGGGATTACAGACTGAACTCACTTTTAAATCTTTTAAATGTGAAAAAAAAAACTCTAAAAAT
CATGTGAGTTTTTCTCACTCCTGTATAAAAGAGAAAGAGTGTGAAGGTGAATTATTTAAACTTATAAATAATGATTATA
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GGTAGTTTAATAACAAGAGCAATTATTCCACAATCCTATGAGACACTGAATTCCTGCCAGAAGAAAGTAAACTCAGAAT
TGGCCTCAGTCAAGGAAGATTAGCCTATTTTTCAGTGCATACCAAAAGAATGCAATCTCTAAGAGCACATTATGTGTGA
AATAAACTAAAATAAGGAAAGTTTGAAGAACATTTTGAAAGAAAAAAACTAGTCCAGTAACCTGGATAGTGCTCTCAAT
GAAACACGGCCCCTAGATGAAGGACCCATAGTTGAAAATTACTGATTCTTCCTGCCTCTTGAAATTCCAAGAGGCAAAT
GGCCATTACAGGAGAGATATTGGTTCACCCAGTTGTGGATATTGTACCTAGAGGTACACTAGTGTACTCTCACTTTATC
TCAACCCTCTTCCCTCTGTATATTAAAGAAGACTAAAATCAAAACCATGCTCCAGTGTATTGTAAAATAGAAATATTTT
GAACTTTAATTTTTTTTTCTTTTCTTTTGAGACAGAGTCTCACTCTATTATTGCCCAGGCTGGAGTGCAGCAGTGTAAT
CACAGCTCACTGCAGCCTTGAGCTCTTGGGCTCAAGTGATTCTCCCACCTCAGTCTCCCTAGTAGCCCAAACACAGGGG
TATGCTACCACACCCGGCTAATTTTTTTTAATTTTTAGCAGAAATGAGGTCTTGCTATGTTGCCCAGGTTGGTCTCGAA
TTCCTGAGCTCAAGCAATACTCCTGCTTTGGCTTCCCAAAGTGCTGAAATTACAGGCAAGAGCCACTATGCACAGCCTG
AACTTTAAGTCTTGACGGTGGGGCATATGGTGGCAGGCTGGGAAGAAGAAGAAAGTTGACTTCTATTGGAGATGACCAA
TACGTGTTTTCCACCACATTCTAAATAAAGGTGTGTATTAATTGATGTGCATTTTTGAATGAGTATCACTGTTTTACTC
GTTTGGAAAATAACAGTAGCACCTACTCCATGCCAGGGTATCATTTGAAGACACCATAGATCCATGAAAGTAAGACAAA
AAAATTGTTTGGAGCATGCATTCTTGTCTTTATTTAATTTTTAAAAATTCTTGATACAAAAGGAGATGTTTCCAGCCAA
CACTGAGATTCCCATATGAATACTTGTTTTCACTTACACATCAATCATTTTAAATATTTACTTTTGCTTGTCAGTCTTA
GCTTCTTAATGAATTGTTCTCAATGTCTCCTTTACTGTTTTCTGAGCCATATAAGGAAAAACAGTCACACTGCTGGAAC
ATTTATGTGATGTGTTTCTTGAGATAAGATATTCCAGGGAGTATTACTAAATCATACTGTCTAAGCCCTTGCAATATGA
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TAAGGAATATCAACCACTGGGCTTTGCTTTCAGATTCCTGGTAATCTGTGGTATGATTCACACCAGGTTCACAGAGGAA
ACAACCCCAATTATTCCGTCTGCCTACTGCAGCATCTCCTAGGCTTTGTGTCCACCTACGGTTAATTGCCTTGAGACTT
TATGGTTTTTCCTAACCTTGGGTCAAGAAAAAATTTGCTGACATTGAATACTGGAAAGTTGTATCTAAACATATATAATG
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CAAATGTGGAAGGTTGTGATGTGACAAGAAATCATTTCACCAGTTCAGTAAATGATGTTGTCTCCCAATAAATGTCATG
AATGATCCCAAGTCCAAAATTTTTTAACTCATTGTTTCACTCCCAAGGGAGAACAAAGCTACATGCAGATCTCATATTT
CCATGTTTCAAAATTCATTTTTTCTTTGGTGCTTACAGAACTTCAAATTGAATTTGTTATAACCACCAAGATCAGTTTT
GTTTTTGTGGATTGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTTAGCTAGTGGATAGCATA
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TTCTAGAGTCTAAAACATTTACTTCTATGTGCCTTCAGAATAGTCTAAATCCATTTGAGCATACAGAAAGCGGCATGGT
AAAAACAAAACAGTATTTGAAGGCCTGGGCTCAAATCCAGCTACACTGAACATTTCCATGCCTTGGGATTTTATGACCC
AGTAAAATTTCTGGGACACTGACCTAGGGTTACTAACTCCTTATTTTGCCAGGTAAAGAACATTAACAAGGAATTACCC
ATCAATATATATGTTAATTTTATTTTTTAAAGACATTTTCACTTCAGTGAAAAAGAAAGAGCATAATCTCAGAATAAAA
GAATTTTCCAAAGGAATAYGTATAGTTTAAAAAAAAAATCTCACTGCATGGTCCATGTACACTCTGACTTTGACAAGGA
CCACTGAGCATTCTGTTGGGCAAGTACCAGATCTTAGAGTGGCATTTGGAAACCACTGAGTTCTGTCAGCTTGTCAAGG
GCATGACTGCCAATGAGTAACTTAAGTTGTCAGGGCCTAGTTCCTTATGTTAGAATGGGAATATGAGCATCCATTTAAT
GCAGAGTTGTCAGGATTAAATTCAGCATGTTGGTAGAACACCGTGTCTGGTGCCTAGTAGGCATTCATAAAACACATTG
CTCTCCTCTCTGTTTGATCAAGGGCTTCCTTTTAATCTATTGAATCTTTTCACCACATGCAGACCTTTAAAATTGTTGC
ACTAGTTGACCAAAAAATCTTTTCCCTAGGATCCCATTCTGGTGAAAAACCAAAAGGGCAGGGCCACTGGCATTAAGAAC
AAGCCTGCCAATAAGATAAACTGTGAAAGAAGATCCCGTTCCTAGAACACAAAGTGAGAGCACTTGTGAATCCCTGCCC
ATGTACTCAACTCTTTCGCTGTCTTTCTTCCCTCCATGGAAGTCAGACTCTCAGCTTTGTACTCAAACCTTCTGGTGAT
AATTTGGGACATCAGCCGTCCTAGAAAAGTCTCTCTATTGTATTGGTTTTTRTTAAACAAAATAACCTAATATGCTTAG
TGAATATGTCTACACACATGTGCTAAACATTTGTTTAATTATTTAACTTGGAAAATTTTGGTGTATCATTTCTAACAGA
GATAGTCTTTGTGCCATCATATAACTAACAAATTTGAAGGCATTCATTGGCATCATGTATTTTCTCTAATGAGTCCTAA
ATTGTTTCTCATGACAAATAAAGAGATTCCATTTTAGACTAGATTATTTTTTGCTTATGTTGCRTAAACTTCAGTCCC
ATCTGCTTTATCATCAGTGCCTGTCCTCCACAAGTGATATGAGCACACATGAGCCAAAAATTAAGGATTTTTGGTTGAA
AGATTTTTTTTTTTTTTTTGGTCAAAGATGGGGCCGGGCTCTAATTCTTGTTTTAAATTTATTTTTCATCAACAAATAA

Fig. 9.296

CAAATTATATGCATTTATTATATACAAGGTAATATTTTGATATATGTATACATTGTGGAATGATTAAATCAAGCAATTA
ACAGGTCCATCACCTAACAATTTATCATTTTTTGTGATGAGTACATTTAAAAKCTACTCTCAGCAATTTTCAGGTATAC
TATGCATGATTATTAATTATAGTCACCAGCCTGTACAGTAGATCTCTTGAAATTGTTTCTCCTTCTAACTGAAACTTTG
TACCCTTTCACCAACATCTCCCATTCCACATCCTCCCATTCTCCCCCAGGCCCTGCTCCAGTCCCTGGGAACAACTGTT
CTACTCTCTGCTTCTATAAGTTTGATTTTGTTTTTAGATTCCACATATGTGTGAGATCACATGGTATTTATCTTTCTTG
CCTGGCTTATTTCACTAAGCATAATGTATTCTAGGAACATCCATATTGTCATAAATGGAAGGATATCCCCTTTTTAAGC
CTGAGTAGGATTCTAGTGTGTGTGTGTGTGTGTGTRTATAACATTTTCTTTATTCATCTGTTGTTAGACACTTAAGTTG
ATTCCATATTTTGGCTATTGTGATTAATGCTGCACCAAACATGGGAGTGCAGGTATCTCTTTGACATACTGATTTCATT
TTCTTTGGATATATACCCAGAAGTAGAATTGCTGGATCATATGGTAGTTTTATCCTTAATTTTTTGAAGACCCTTCATA
CTGTTTTCCATAGTGACTGTACTAGTTTACATTCCCACCAACAGTGTAAAAAGGCTTCCTTTTCTCCATGTCTTCACCA
ACATTTGTTACCTTTTTTTGATTAAAAAAAAACTATTATAGGTGTCAGGTGATATCTCATCATGGTTTTAATTTGCATT
TCACTTAAGATTAGTGATGTTGAGCACTTTTACATATACCTGTTGACCTTTTTTTGTAGGTCTTGTTTTGATTTTAATT
TTTTTGTAGAGAAGGTGTCTCACGATGTTGCCCAAGCTGGTTTCAAACTCCTGGGCTTAAGCTATCCTGCTACCTCAGC
CTCCTAAGGTGCTGGGATTACAGGTGTAAGCCACTGTGTCAGGCCATTGTTTTGAGAAAGACCTATTCAGGTTTTTTGC
CCATTTTAAAATCAGGTTATTTGTTTTTTTGCCATTGAGTTGTTTCTTAATTCTTAAAATATTAATAAGATGTGAGCAA
ACAGTTTAAATTTCAGAAAACTAAATATCTTTGAAGGTCACTGTACTAGTCTGTTCTCATGCTGCTGATAAAGACATAT
CTGAGACTGGGCAATTTACAAAAGGAAGAGGTTTAACTGGACTCAGAGTTCCACGTGGCTGGGGAGGCCTCACAATCAT
GGTGGAAGGCGAGGAGGAGCAATTCACATCTTATGTGGATGGCAACAGGCAAAGAGAGAGAGCTTGAGCAGGGGACCTC
CTCTTTTTAAAAAATTAGATCTCATAAGACTCATTCACTACTATGAGAACAACGCAGGAAAGACCAGACCCCCTAATTC
AGTCATCTCCCACCAGGCTCCTCTCAGGACATGTGGAAGTTGTCGGAGTTAAAATTCAAGATGAGAACCCCATCTCAAA
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GAGAGGATCACTTGAGTCCAGGAGCTTGAGGCTGCAGTCAGCTGTGAATTGTGCCACTGCACTCTAGCCTGGGCAACAG
AGTGAGACCCCACATCTCTTTAAAATTTTTTCAAAATATTTAAAATGATCAAAACGGGCGAGGCGCTGTGGATCATGCC
TGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGTGGATCACGACGTCAGGAGATCGAGACCATCCTGGCTAACACGGTG
AAATCCTGTCTCTACTAAAAATACAAAAAAATTAGCTGGGCAYGGTGGCAGGCGCCTGTAGTCCCAGCTACTCCAGAGG
CTGAGGCAGGAGAATGGCGTGAACCCGGGAGGCGGAGCTTGCAGTGAGCCGAGATTGCAGCCACTGCATTCCAGCCTGG
GCGACAGAGTGAGACTCCATCTCAGAAAAAAAAAAAAAAAAAAAAAATGATCAAAACACCAGAAAAGCTGCATACACAGA
TATACAAACAGGTGGCCTGAGTTTGGCGTTGAAAAGTTTCAATTTGGAAGATGTTACCTCACACAATACTAGACAGCTT
TAATGTTACTCATATATTAATTTACATTTTCTTTGATTCTCAGTAAAAGGTTGCTGGACATTCTTGCCAAATTGAAAGT
TTTGGTAGTTGTGATTTTTAATACAAGTTTTTGTGTTAAATAGATTATTTTAATTCTAAGTGGCAATAGCTTCAAAGAG
GAAAAGCACATTCACTTGTAACTGAAGTTGGCTTTATTATATTAGGAACTTTATTCCCTAGGGTTTCATAAATAGATGT
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GTATGTCTAATACCAAGGAAACAGTTTTTATGTATTTTTGGTATTGTTTTATTTACTATATAGATTACTTAGAGTTTAT
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TAACATTCCCATGAATTACCTGTGCAGCCCAGTTTCTCATGTAGCATTTTAATATTTACCTTTGTCTTATGTATATTTA
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AACCCATATGATTATTTTTTAATTTATTTAAAAATAGAATCAATGCTTACATTTTAATACATTTGGATTCACATAACTT
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TGGTTCATTAATGTTTAATGCTAAAAGCAAGATATACAGTTGAATATACACTATGACTCTAATTCTATAAGGAAGTATG
TAGTCCATAATAGTCACATACTATATTGCATACATGTGCTCACATACATGCAGTGGGAAAATGTTATCAATAGTTATCT
TTGAATGGTTCTTTAAGTTGTTCTATATCTCCCAAAGTATGTATATGTATGCATGTACTTCATATGTGTGTATGTATAT
ATATACATACACATATGTATGTATACGTGTATCTATACATACACATATGTATGTATACGTGTATCTATACATACACATA
TGTATGTATACGTGTATCTGTACATACACGTGTATGTATACGTGTAKCTGTACATACACGTGTATGTATACGTGTAGCT
GTACATACACGTGTATGTATACGTGTAGCTGTACATACACGTGTATGTATACGTGTAGCTGTACATACACGTGTATGTA
TACGTGTAGCTGTACATACACGTGTATGTATACGTGTAGCTGTACATACACGTGTATGTATACGTGTAGCTGTACATAC
ACGTGTATGTATACGTGTAGCTGTACATACACGTGTATGTATACGTGTAGCTGTACATACACGTGTATGTATACGTGTA
GCTGTACATACACGTGTATGTATACGTGTAGCTGTACATACACATATGTATGTATACTTGTAGCTGTACATACACATAT
GTATGTATACGTGTAGCTGTACATACACATATGTATGTATACATACACGTGTATCTATACATACACGTGTATGTATACA
TATATACATACACGTGTATACTTATATATACATATACGTGTACATACATGTATGTCTACATGCATGTATGTGTGTGCAT
ACATGTATGTCTACATACATGTATGTGTGCATACGTGTGTGTACATGCATGTGTGTACATACGTGTGTGTGCATGTATG
TATATGTGCATGTATGTATGTTGCATGCATGTATGCATGTGTATATATGTATGTATGTGCCTGTATGTATACATGTATG
TATATATGTATATATGTGCCTGTGTGTATATATACATGCATATATGTATATATGTACATGTGTATATAGATGTATGTAT
ATATGTACATGTATGTATATATACATATACACATACACACACACATAAAGATCAAGTAGGTTACATTATATGTTTGTTTTA
TATGTCCATACTTCTATGAAGATGGGTCTAGAGAGTTGTGAGTAGACGTGGTCCTCCTATAGCTAATCCTTGGGTGTTG
TCAAATAGTCTAGGCTCCCAGAAATATTTTTATATTCATTTTAAAATTAGAACATACTTGTTTCTCTATAATTCTAAAA
GAAGTTGTCAAGGGTGAATTGATAGATGGATGATAGTTTTTAGGCTGAGGAAAGAAAGATACTAAGATTTCAAAATTAT
CAAAATCTTGGACTTTAAAATATATTTCAAAAATATTATTTTAATTTTCTATATGTTTATCAATTTCCTAATCCTATTG
ACAAACTTCAGAGGAGAATATCTTTCTAGTAAGAGTGAGTGAAGCACAGAAGATGAAAAAAGTTTGCACAAGATTCCAT
TCGGCCAGCGCGGTGGTGCACACCTGTAATCCTAGGCACCCCATAGACTGAGACAGGAAGATCACTTCAGCCCAGGAGT

Fig. 9.297

TCAAGGCCAGTCTGGGCAACATAGCAAACCTCCATGCCATTGAAAAAAAAAAAAAAAAGGATTAGATTCAAACGTAAGCC
CCAGCCTGTGACTCCTTCACAGTGCTAGTTCATGCATTCATTTGTCATGCTAAAATTTGCAATGTGTGATATTCAAAAG
CAGTGGGTCTTACATGGCCACTAATGCTTTAAATATAGTAGGATTAGGGGTCTTTGCTCCATAAAGTAAAAACTTTCTT
CTAATTAACTGTATCTCCTTTTCCTTATGATTTCGTAATAGTAAAACAGATAAAGATTGCCACCTAGTGTGTTTAAGAT
TTCAACCAATCATGAAATGAACTTCTATAGGAAATTATATTTTCAGGTGCTGATGTTGGTTGAACTTATTTTTTTAAGA
TGACAACAGGCTTTTTCATTTTTAAGTACTTGAACCATATATGGATCTCAACAAAGTCACCATAAGAGTGTGGGCATTT
GGATTTCTTGCTTTTAGTTTCTTGCTTGTTTCTGTTTCCTTATTACAGAAAGAAAAAGGGTAGAAAATAACGTGATAAA
TAATACAGAAGTAGAAGAAGGATGGGAGGGGGAATAGAGAATAGAAGTTCCTGACTCTACTGTCATTTCTCTTGTGAGA
AAAAAAAAGACAATAGTATACTGTTGAGCCCTGTATTCTCCTGCTTTCAACAGCGCTGGCTCAGGACTCAGCAAGTCTT
TCTCTTTGGGAGAGACAAGGCTCGCCAGGACTAGTGAAGATGACTCTGGTTCACTTCCTGGTAACCAGGGAAGGTGACA
GAGCATGTGGCACCTCCTTGGACATCATGAAATTTAAAACCAATGTGACACTGACTCCCACAGTGACCTACAGTGGCTC
ATCCTGGCTGTTCTAGAAGTTTCTGCACTTGCATTCTGCTGTGACTGTTACCTTGGTACCAATCTCATCTCTCACATAC
ATACATATGTGCATACATACATACATGTATACATGTGTGCATACATACATACATATAGACACGCAGTGTCAAAATGACT
TTTTTTCTGAGCCTTCCTATCCCTCATTCATTCTCCGCCTGTCCTCCATGAACACTCCAGTTCTTTTTTTAAAAGAGC
TGTATTTTCCTTAAAACAGATCACAGCTGTTTTTTGTTAAGGGTTGTTGTTGTTATAATTGTTTTTATTTAAATGAAAG
ACAGTATTGCATCATCCTCACCCAAAATTCACATTACCAGGCGGTACAATTTCAAAATGTCCAGGCGATATTCACTGTG
TGACTTTGAATCTAGCTTTTCAGTCACTTTATAGAGACCCTAATAGTCTCTTCCCATCTCAGAAGAGACTCAGAAAAAT
ATTTAGCCAAGTAGGCCTAGGAAGCCCCAATTTATTACATTGTATTGTAATCCCTCCCAGCCCCACTTTACGTGGCAAG
GCGCTTTAAAAAGCTTCTGTGGGTAAAGTTGTTCAGGTGCAAGATTTCAGAATTATTTTATTTCATAGGATTTTTTTGA
GCATATGTGATTATTCAGTTCATTAAAACCCACACATACTTTAAACCAAATCATATTCACAAAGTGAATCTTCTGTTGA
TCTTAACTACCAGATCTGTTTTTAAATGATTATAAGCAAAGTGTAAGACACAATTCAAAGATATGTTTGTATTATATTT
ATTTTCTTCTAACCACAAATAAAAATAGGTTTTACTTGCCTTATTCTCCTAGTGACAGTATGTCTGAAAAGATCTGTTT
TAATATTGAGTTGAGGACTTAGACAAAGATTTTAAAATTATATGTTAGGTATATATTCAAAGATAATTTAAGCATGACA
TACTTTTGAAAATAAATGGATAGGCTATAACCTGCCGTTTATCGAGGACATCTGCCACTGAAATGCTAGGTATCATTTT
ACTGTTACTAAAATGAGACCATCTTGAGATATTTGGCAGAAACAATTTCTGGGCAATTTATTAAAAAGTAATATATTTC
CTTCACTAAAATGATAACTGTCTTTATGCTTTCATAGGGAAAAAAGGCTGGTAAATTATCATAAATATTGTAAAGTGTA
TTACTTATAATACTTATAAAGGAGATACAACCAAAGAGAAAATTAAATGTTTTAATAAATATGCAACCCTTTTGAGTTT
TGAAAGATTCAAATCCACTGCAATCTATATAAAAAATTAGGAGACATATTTCCATGGATTCATTTCAGATTGATGATGT
GCCTTGTCAAGATGACTTAGTCCTGAAAAAAATAAACTTTATAGTAGGTCAATTATAAAGAATAAAATGAAAGAAGAGA
CTATAGCTTGGGACAATAAGAAGATGTCATATTATTTTAATTTTGGTTATCTGAACTGCCTCTCATCCATTTTACAATA
CAATGTCTTCAGCTTGGCCATGCACTGAAGCAGATGAATAGTTTATCAGACTGGCAAATCAAGTCGGCATAGGTGGCAT
GTCTTTTCTCCTTGTGTAATATACCTCCCATTATGGAATTTTTAATAACATTTTTTAATGTCAGAAACCATTGAACTAT
CTTGAATGCAATATATGTAGTATATACACCTATTGAAAATGTTTTTTGTCTTCGGACTTCTAACACACTACACAGTTTA
CTGATTTGTCCACCACTCCCAAGAATGTTTGGCTTCAAATGAACTCTAAAGGTGCCTTTATGTGTGTAGAAATTTGTCA
AATGCTGAAGTGTTTAGCTCTGGATTTTGTCTTCATGCTTTTTAAACACTGGTGTATCTGTAAATATTTCTCAGTTGTT
TTGTGAGAGTTAGGCTACTGTTTCAAAATAAGTACATAAGAGAAATTGCAGCCCTATATTTACCTATATGACACAGCCA
GAAGGGAAAGTCAGAATGATGGGCCAAGGAAGAAATGTAGCTGGCCAACCCTGGCATCACTTTGTAATTTGCATTTATT
GGGCCATTTTCCTAGAGCTTTATTTTTAATCTTTTTAAGCTGTTCCATAGGAATCAGCCAATGCATATCACAAAAGGGG
ACCATTCCAGGTATGGCTGTGCAGCTTACTACCTGCGTGTCTTTGTGTTAAATCTCTTAATCAATTTGAGCTACAATTT
TCTCATCTGAAAAATGGGAGTAATGTCACCTACCTTGCAACATTGTTGTAACAGCTGATGATTGTATATAAAATACACT
TGCTGTGATAACATTCTTTTTACTTTTGTAAATGCTTGAAATTTTCATATCTTTTTTTCCCCAGAACTTTTTCTTTCCC
CCAGAGCTTTTAATGCTGTCATCGTCCCTCTCTCTCTCTCTCTCAACTACCACTGATTTAGTTTAGGTCCTCATCTCTT
CTTTTCTCTACACTGGTCTCCCTGCTTCCATTTTTGCCCCTTTAAAGCCCTCAATCTTTTATAGACCTGTCACAGGGTC
TCAAGAGTCCTTCTTAGCGAAGTATCAGTTTTCTGAGTCTTTGCAATTTCCTGACTGCATAGGAAAGCAAAAATCATTA
TGATTTAAAAGGTTTTACTACTGCTGCTAATTATTATTATAGAAATGTTTATTGAACATTTACTGTGTGGTAAGCACAT
TTTTCAGCACTTAACATTATTAATTTATTGAATCCCAAAACATCACTCTATGTATGTGCTGTTATCTCCATTTTACAGA
TGAAGAGGCCAAGGGAAAGTGAAGTTTAATAACTTGCACAATTTCACACACCTAGTATGTGGCAGAGCTGAAATTCCAA
CCCAAACTTCCATCAGAGAGTAAAATCCAAGTTCTTGTACATTTCATACAAGGGCTCTGTGATCTGCTGCCTGGCTCGT
TACCACCCATGATTCTGAATTTCCTGCCTTCCATGGCATTCTCTAGAATCACCGAGCTTCTCGTTGCAGCTCTGTATCT
GCTTCTTTCTCATCTAGGCAGCTGCTCTGCCTCCTTGGCTTCATCCCTCTCTGCTGGCTCCCACGGGCTCAATGGCCTC
CTTGCCACTTCAGTGCACCAGGCCTGCTCCTACCCTGGGCCATTGTTCTAGGAAAGAGCCTTTCTGGGCTTGACCTCAG
AAGACCTTTTTTTTTTTGAGAGTCAAGGTAAATTATGTAAATTATTTATTGATGACAGAAGAACACTATCTTAGTCCAGT
TTCTGTTGCTATAACAGAATAGCATAGACAGGGTAATTTATATAGAAAAGAAGTTTATATCTTACAGTTCTAGAGGCTG
GGTAGTTCAAGGACATGGCATCAGCATCTGATTAGGATATTTGGGATGCATCATCCCAAACAATGGAAAAATGGAAGGG
CAAGTGAGCACATGCAAAAGAGAAAACATGAGGGGCTGGGCTCACTTTATAACAACCCACTCTTATGATAACTAACCCC
CTCCCACCATAACAGCATTAATTCATTCATGAGTGTGAAGCCCTCCTGACCTAATTACTTCTCACAGGCCCCCACCTCT
TAATACTGTTGCAATGGCAATTAAACATCAACATGGGAAAATACCTTTTTCAATTGACATCCTGCCTCTACCACTTATT
AGTTTTTAGACCTTATGCCCTCTCTGAACCTCAGTTGCCTCTTCTATAAAATGATCATAAAACCCAATGTCCTACCTTC
TTAGAGTTCTAGAGTTCTATGAATAATCTCTACAAAGAGCAGGTGCCCCTTGAAAAACATGATTCTGGAACTAAGGGGG
TGTAAAATAACACATGCTTCCTTTACATTGTTTTTTCCTTCTTCTGCTTTTATTTCCCACATTTTTATTTTCAAGATCT
CCACATGGTTTGATGACGACCACAGCACCTATTCTAGCTATTGGTAACAATTTATTGAGTAACATCATCCATATGCTCC

Fig. 9.298

CTGTGCCCCAGCATGTTTCATGGGTGTTGTTTTGGGTCACTCAGGTTGTTTTCAGATTGTTCATGAGTGAGCGAAAAGT
TTATTTGCACTGTTCTCAGGGCCATGTCCAGGGAGCTGTCTGTGTTGAATAACAGCATTCACTTTTGATTTAAGAATTT
TATCTAGCTAGATCAAGAAATAGCTGATGGTGACTCTGGAAATCCTTGTCTCAAATTATTCATGCTAAGAAATACCACA
AAAGAACCCTGGGCCCCAGTTTCTCACTTTCCTCTAACTGGAATGTTGCACAACTTTCCTTGCCCTTCCCTGTCCCTCC
AAGACACGTCATGCTGACACCTTGCTCCCATACCCCAGGCACGGTGTAGCTGGGGTTGCTGCAGCAACAGCACACAAGG
AGTAACATTTCCCAGTGACTACAGTGGCTGGGATGAGTCAGTTGAACATTTCACTGGGTTTTTATTAGTGTATGATGCA
GTCCCATGTCATCTACAGTTCCTAGCCTGTCCAAGACTTACACGGGATGATGTGGAACACTCCATGCTAATCACCTTCA
AATATTAGATGGTCAAGGGTTCTCTCACTGAAGTCACTGCATTGCTGGTTCCTTCCACAGCACCCCTTACTAATATCTA
CAGTAAGAGGCCAAAAGTAAAACTCAGGCCCCACTGCTGGAACACCATTTCTACTATTGCATATCCTGTGTGCCTAAAA
AGCAACAGTGACCCTGGCTGATGATCAAGAAGCCCCTCTTTTTACCCAGGGAGTTGGACAATTGTTAACATCCCAGAAG
ACATATTTTTAACCCAGTTGCTGGGAAGAACATGTGCTGAAGTATAAGGATGGAATCACTGTAATTCTCTATGGGAACT
CATGAAAGTGGAACTTGCCGTTTAATATTGAACGACACTGAGCACAGAGTTATTGATGATTTCTAATGCGGGATTTGGT
TTATTTTTCAGACACGGAGATGACTTGATTGTGACTCCATTTGCTCAGGTAAGCACAGCTTGGTGAATGGGCAGGTTTC
TCACAGATGTAAAAATTTAATTTGGGGAATTAGTTCGGGTTATTAATTTAATTTAATTTTAAATCAAGCACAAGTACAA
ATACAAATTCTTGGTTCATTCAAGCAATTCAAAAGCAATGCTAGAGAAAGTGACTTTGGCTATATTAATCTGTTTCCTA
TAAACCCATAGTACCAAAGAGTGTCTTTGCTTCAAATAATAAATTAGCTAAGGGATATACTTAATTGGGCTCATACTGA
CATAAGCACTAGAAGCAGAAGGCTATATCATGGCTTAAGTTATGTTTAGTATAATTAGGTACATGATCAGTGCTTGAAA
TTCAATATTCCAATTCAACCCAATACCTTATTTATCTCTTTTTTACATATGCCATTTGTGCAGAGATTTAGCTGAGTGA
TGTGTTGATGTTTACTTCTTCCTTCTAGGCATACAAATCATGAAAATACTTTAACCACATGACATATGTGCAAGCAGGT
GATAACATGATCTAAAATGTTTGGGAATATAAATATGAAAGAGTTGATGACCAGATGTTCTATGTATAGACCAATACTT
CTCAACCCTACCTGCACGTTAGATTAACCTAGAGACCTCTTATCCCAGTGCCCAGGCTGCAGCCCTGGTCAATTAAATC
CAAAAATTTGGAGATCTGTTACAAGCATCTGTATTTGTTAAAGGCCTTAGTATTTTTCTAGTGTGCAGGAGAAGTTGAG
AGTCTCTGGTATAGACAACTAAGGGCGGAATGAGATAAAACTGATTTAACCTGGGGCATGAAGCAGGTTTAAAACCAAC
ACTGATGAGTAAGAAATGTTAAATATTAAAATGCAAGTAATCCTGAGAGGTTGTAAAAATTATAATCAGGCCTATATCA
TACATCAAGGTGCTCTTGCACCTTGGACAACTCACTTAAATTTTCTGGGTCCTCTTTTTTTTCAACTGGTAGAGTTAGG
GGACTGAGCTGGATGAAAGACAGTCAGATCTAGTTAAAACCCTTTCACCGCCTCTTGCCAACTCAATGGACTTGAGCGA
GTCACTGAACTTTTCCAAGCCTGGTCTCTTCCTCTGTTAAATAACAGTTCCAAGAGTACCCACCTCATAAGATTGCTAA
GACACTGAAATAATACCACGCTTATAAAATGCTAGGCACAATTGCTTGAAAATATAATATTATAAAAACTTTGTGATTG
GTTTAAATGTATAGAGCTGAAAATGTTCTTTCATTTCTAAAATGTCATAAGTATTATTTTTTAAATGGATAATAGGGTT
TAGATAGTAGGATTATGTATAGTTCTACTTTTTAAAACTTTCCAAACTTTTATTACTGTAACTTAGACCTATAATATAA
TCAATTCATAAGTAACATAATGTATAATAGTAACTTTTTAAATTAATGCAGGCAATTAAAAATAAAATACAATCACCAT
CCTTTTCAGATGGTTAATATCTTGTTTGCTGAAGGTTTTGCTGGAGATTATGAATTCTTTCTAGTACCTGTATTTCTGT
GTCCAAAAAATTTACACTTGTATGATTTAATAATATGATGTGATAGCAAAATCTTATAAAGCTGAGGGTTTTTAATTGA
TTACTATTGAAAACTTATGGCCGGGTGCGGTGGCTCGTACCTGTAATCCCAGCACTTTGGGAAGCTGAGGTGGGTGGAT
CACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACTTGATGAAACCCCTGTCTCTACTAAAAATACAAAAAAATTAGC
CAGGCATGGTGACGGGTGCCTGTAATCCCAGCTACTTGGGAGGCTGAGGCAGGATAATTGCTTGAACCCGGGAGGTGGA
GGTTGCAGTGAGCCAAGATCATGCCACTGCACTCCAGCCTGGGTGACAGAGCAAGACTCTGTCAAGAAAAAAAAAGGAA
AGAAAGAAAACTTATAATTCTATATCTAAGACCTCAGAGAGAGGTGAACAGACAAAATATGGCATAACAATGTAAGTAA
CATCATCAAACATAGAACCAATCATTCCAATTTGAGTTCATTCAAGTAGCTATTCTTGTTTCTAACCAAATGATCTAGG
TATTATTATAAGAAAAAATATATATAAATATTTAATAACAAATGAAAAAAGGTCTGTGTATGATATATGGTCTTTTACA
TCAAGTAATATTTATTAAGCTGCAACAAATAGATTAGTAAATTGGACTTGAACCCTGCCATCAGTGCTCTTAAATTCCA
AGGAAATCTAGTCTTTTACCTGATTAGATATTTTCTGTAGTGTACCTATAATCTCCAAGGAAAAAAAACTAATGGAATT
TCAAGATATTGGGAAATACACACATATATGTAATTTAGTCCATGTTAGTAAGCTATTTAAATAAAAAAGATGTGTACTT
AATATACTTGAAATTAGAACTTGGAATATAAATCAGCTGTATAATTTATAGGCATATCTGATGCCTAAAAATAATCCCA
TAGTATATTAAGTCTTTGCTTATGATTAGCTAAGTGACTCATAACACCTTGTAGAGAGTGGTCATTACTTGAGAGGCTG
CCGATTTTTTTAAGGGGCTTCATCATGGTTTTCACAAATGGCCTTTTACTGGAGTATAAGACCTGGAAAGCCCCACTA
GAATTAAAAACAAAACAAAACAAAAAACTGTTAAGCCCTGAAGAGTTTCACCACTCTTCATAGAGCATCTGTGGGGAGG
GGTTAAGAGAGAAGTCCCAGTGAGTATGTTTGAGTGGCCTTCTCTTAAACCCTGTTGGACATGATTGGCATGTTTTGCT
GACCCAATCACTAACTTCTCAAATTTTCTTTAATACAAAGTAAAGCACTTACCACTTAATGGTAAGTGCTATTTTAGCA
TTAACTATTTAAAACTAAAAATATAAGATACTTATGTCACTTGAAGTGATACCAATCTAATTTGTCCTGATATACCATA
ATTGCTTTCACCAAAGGACAGAAAACAATGGATTTTAGAAAAGTCACTCAGAAAAATATTTAGCCAAGTAGGCCAAAGA
ATTACCCTCTTTTCTCAGCATGCTTTGAAAATTGGAATTTCACACTAAATTCCAGTGAAAAAGCTATGCTTCTCAAAAA
GACAAAACAAAACAAAAACTTTTTGCATAAAAGTTTAGAAAAATAATAAGAAAAAGAAAAGGAAAATTTTCTAAAATTC
CAAACCCCAAAATAACTGCTACTGACATTTTATTTTATATCCCTTCAGATTTATTTTTCTGTGCATATTTTCTGTCCCA
TGGCTCCTAAAAATGGCCTTCCCCTGTCTAAGGTGTTCAAAGATCCCCTCCCAAATCCATCTCATCTTCTGCCTCTTCT
TGAGAACTCATTTCTTTATGCCTGAGTCCATCTCCAAAACACGAATCATGGTTTCCAAATCATGGTTTCCTTTGACGTG
AAAAGAGCAAAATCCTAAATTAGAGGAGAATTTAGGAAGCCGTGCAAAGATAGATTGCACTTTTTTGGCCAGGCTAAAG
CCTGAAACATCTTGGATAGTAATTTTCAGAAAGGATCCTATAGTATCTCTCCATAGTTTATCCCATTGTCTAAAACACT
GTCAGGGCTAGAAATTCTTGCTGGTGTTTAACCTAAACTCTTTTCCACCTCTGATTTCTTATGCTTTCCCCTGTAAGCT
CAGAATCCCTTTGGTCCTCAGAAAAAGTGACAGCTTTAAATATTTTTCTTATTTCAATTGTTAAAGTATTCTCTTGTGT
TTGTGTTGAAATCTTTTGGTGTGGGTGTTTCCTTAGCACGAAGGCTAGAGAGGAATCCCACTGGAGTGCACGCGGCAAC

Fig. 9.299

TGACCTTTTTTTCTTGGCCAGAGTTCTTGGGGGCCAAGGAGCACTAAGGAGGCACAATGCTGATAAACTGTAGGAAACT
CTTCTCTGCTGTCAGCTGCCTCCGGGCTCAGTGATCCCAGGATTTGTGACACAACTACCCTGTAGTAAAACTCTAAGTT
GACTAGAATTTTCATGTGGAAGTGTGTAATGTTAAATGAAGTAGACTCTGATGAAAGAAAGAGAAAACAGGAAAACCCA
AGCATTATGCTGGATCCCTGGAGAAACCCTCACTTCATTCAGACTAAGGAGATATCCCTGATTTGAAAATACAGAGGCG
GGAGAATAACTTGAACCCAGGAGGCAGAGGTTGCAGTGAGCCGAGATCGCGCCATTGCACTCCATCCTGGGCAACAAGA
GCAAAACTCCGTCTCAAAAAAAAAAAAACAAAAAAAACAAAAAAAAAAACGGGGTAGGAACAACTACATCTCTTTACCT
TTACTCTAACCAAAATACAGCACCTGGGATACTTCTAGGATAAAAATGCAGTAGTTATTAATACTATAGAATATTACCA
TTTAGTTGGTAATAAAATATAACCAATATTCTCATATTCCTGCCTGTCCCTCAGCCACTTCACCCAGCAGCAACGATCT
TGTGGCCTCATCACCATCCTCAAGCTTGCAGACTGTGCTAGGCCCTCCCTGCCAGGCTATGAAAGAAGATAGTCACCTC
GTTTCAGTCGGTGCTAAATTTTTAGCTTTCTTTAGCCTTAATTAATTTAAATTACAACTACTATCTTCTGGACATCTA
AGTTCTTTTTAAGAGCGAACCATATAAAATTGTCTATCAACCTTTTCTGGTGTACAAACCAGCAATTTCATAGGGTTTA
AACAAAACATAACCTGGAAAGAGGTTTTCTTTTCATAAAAATGACCTTTCTATTTGTAAATAAGCATAACTTGACTCC
AGCTTTTTCCGGAGGTAAAACCGAAGTAATGAATCTCTCCCAGTGCGGGTCGCCGCTTCCTCCGCCGCCAGTGGCACCT
CAACCTCATGGTCTGTGTTTTACCGCCATCTAGTGGTAACAAGTGTATATGGTTATGAAAAACAATCCTCGAAACCATT
TATTTTCCTCTTTTTTTTTAGGCTATGATGTTCAGCTGTTTAAGTGTTAAATGATAACCGTATTTTCCTGCTATTTTCA
GTGATTCTTATTGTTTAATAAATGTTTAGAAGCACCTAAGAAGATCCGAGAGTAGTGTACGTAAATAACATTGAATCCT
TCCCCATGGGCTAATACATGAACCATCTTTGTCTAAAATTTTTCTGTAAAACTACCAGTATTTCCTTCCTAAGGAATAT
ATATTTCTCATCATTCCCAATGTAATTTTGACATTGACTGGCTATACTTCTGCTTGGTGGGGCAGAAGAGAAAGAAATG
ACCTTAATTTTCTAACCATTGAGCTCTGTGGAAGAAACGTCAGGGATCTTTTTGGTTAGCAAGCATTAAGGAGTAAGGA
CAACTGTAAAAGGAGCCTTAAAGCTTTGACTACAGTTCTTAAAGAGTCGAATTCAGGGGAAGTGAGGGCTGCCCTGAAC
AAAAGCAAAGAACAATGGAACTTTAACTTAGGGGCTTCAGTAAAACTGTTTATAGTTCTCCCCACAGCCTGCAGTAACA
GATGCTCCCTCTTTGTGCCCTGCAATGCAAAGTGAAAGCTTAAAAGACTAACACAGTGATAACAGTGATGACGACACCA
AGAGTCAGTCAGCGAGGCCCAAGACAACACCCCCTTATAAGATTTGTCTAGAAATGTTATTTACACTTCTGCCAATAGC
ATACATGTCATACTGTAGAAGATAATAGTTAACACCAAACATAAAATTTATAAAATAGTTTGTCCTGCTGCAAAAGAAA
AAAAAACCCACACACACACAATAAATAATCTAATACTGGCATGCCTAGGAAATAATTTCTCTACAAGATTATTTATTGC
AACAGTGTTTGTACAAAAACAACTTTAAGATAGAAAACCTAAAAGTTGATTGCTAGTGGCCAGGCAGCTGATTGTCTGA
AGGAGAGACCGGAAGACAGATTCCTTTTTTCACTTTTTATTTTGAAGTATTTCATATATATAAGGGAATATAGCTTGTA
ATTATGTAAAATATAAAGAATAATACTAAAATGAACAGTTTAAGAAATAGAACAGTTATCAGTATTTTAATGTCCCCTG
AGTGTCCCTCCCCAGGTTAATCTGTTTCTATTGCGTCTTTTCAGAAGTAATAATAATTTTGATTTTTATCTTAATCATT
GAAGGGGAGACTTTTTGCTTTATACTCTTTTGTTTAAATTCTGAAGCATGTGAAGATATAAATTATACAAAAATACATA
AATTTTAAACTAAAAACAAAGACAAAATAATATTAAATTAGATTACTTATTAAATTAGAAGTTTATTATAATAGAGGCA
AAAACTCCTCTACAGAAATTTTTTCTTTGATGAACTAATTTTTCTTTTCATGACTGATGTTTCCCTTCAAATGATCATA
GAAAATAAGTTGCCTGCATTTCTATGTCTATTTACCCAGCTGTCAACTGCAATGAACTTAACTATTATGTATTGGAATA
AAAATCTCAGAATTCTAGGGTTAAAAATTTTGCCTAGGAAGGGGATCAATTAGCTGGTGCAATGATTTTATCTTAAAGT
TTCCATTAGTATGTTTGATATTCACTTCTTAAAACATAAATTAAGCCTGCATGATTTAACGACAGTGGATCATTTATCC
GATTTACTTCTGCATCATTCAAGATTTCATGCCTAATGAAAGACATCGTGGTCTGATGTCAGCAGTCGGCCATTTGAAT
ACTCCATCATAGGCAGCGTGACCTTTCAGAGCCGTGGGTTGTTTATATGAGATAATGAGCCAGGTTTTTCCAGTGACTG
AGTTAATCACGGTTGGCTTCTTAGGAAGCAGCATTAACTCCTTTAGGGGAAAATTCTCTAAGTCACTGTCCCAAGGCGT
ACACAGCTCTCCATTGACTTACACAAATGAATGTCAATTTCATAAACAGCAACAACAAAACAGAGTCTGGGACATTTTT
GTCTTAGAAAAAAAATTAGACTGATTTAGTCTAGGTCTGTGCCAGATGAAACATTTCTGAAAACAACTCTGGAAACTT
TGAAGCAATTAAAACTTTGGAGACTCTTGAATTACCAATGCTAGGCATTAAGTAAATTTCCCAAGTGCATGCCAAGTCA
TTAAGTCAAAGGTAACGCTGCCATCATGGGCTAATATTGGCTGAATGCTTTCTATTTGCCAGGCACTGTTCTTGGCACC
AAACCTGTCATTCCATATACTCCTCACAACAATTCTACGAGGTAGGTATCACTATCCCAGTTTTCCAGGTTAGGAAGCT
GAGGTACAAAGAGGTTGCATATCTAGTCCAAGTTCACACATTTACTACATAACAGAGCCAGACAGTCTGGGTTGTTAGG
TAATACCTACTCAGACATTTGGAATCTGTGTTTTACATAAACTTAGCACTCTAGCTGTCACCCAAATCACCTATAATCC
CATCTAATATGGGTTTGACCCTGGGGAAACTTGCCCATTTCAGGAGAAAGAGAGGAGGGAAGAAGGAGATAAGGCTCTA
GGAACCTTCTCCTAGGCTCACTTCCAGTCCGTTGGCTACTTTCTAGTTCCAACTGGAATTAGAAAAAGCGACTGTTAGA
GATAGTGACACCTATTGGTCCTGCCTTGTTATGTGTGTGGGCATGTTGTGTCTATGTATTCATTTAGTCAACAAATTTT
TATTGAGTATCTTCTGTGTGCCAAGCATTGTGCATGTACAGGGCGTAGCATTTTACATAAGAAACGCATCCCTGAGAGC
TTCTTACAATGCACAATTCAGATAACCTTAACAAAGAAAACAATGTCTGCTTACTAGCTAGAGTAGCCATGTGGCAAA
GGTAGAAAAACAGTTTAAAATTCACTTCACTTGCCAACTTATTATTATGAGATTCTTCATCAATTTTTGAAGAGATTTG
GGAGTAGGGAATTTTTTATCCCTAAAGTGAGCTTTATTAGCATTTTATATTATACTATTTGAAATGTGCAAAAATGCAA
TCATGTTATCTGTGTATTGCCTGGAATATTGTCTTGGTGACTAAGGAACCCAGAAATACTGTGGAAACTGCTGCTACTG
TCACCATGTGCATAGACAATGTGGAGGGATTTCTGGAAAATTTCTGCAGTCTGGCCTCTCTGGATTTCGTGTGGATACC
TACAAACTGCACTAAGTGTTGGGAGATTCTTTAGTGGTATATGAAACTAAGTTGCAAGCAATATCAAGTTTTCTCTTAA
CAAACCATTTTCAAGTGTATTTAAAATGGCCTTAGCTCAAGAAGTTTCAAGAATCCTTTCTTGTTGTAGGTCTTGGCCA
GTCTGCGAACTGTACGAAACAACTTTGCTGCATTAACTAATTTGCAAGATCGAGCACCTAGCAAGTAAGATATCCTTTT
TTCCCCCCTCTTTTTTGCTGAACTTTTAAATAAGTTTTCTCAACTTGATTGAGCCCAAGGCAATATGTTAGACTTCTCT
GTGTTGTTGCCATGTTGTCTGTGTATACTAAGTCATATGATGTCCTGTTAATTTTCTATAAATACTTCGTGGTGATGGT
TCTAATATCAGAAATGAAGCAGTATGACAAATAAATATGGTGATTCCATCTGTCAGAAATCACCTGGCATGATCAGTCC
TCCGCCCAGTTATTTACACTCAGGGTAACTTTATAGTTTCGGCTTACTTCATAAATTAACCGTGGGTGAATAATCTCAT

Fig. 9.300

CACACCTTAAGATCAGCTGAAAGTCATCCTCTCAAGACAACGATGATTTGGAGAAGCGCCATATCATAGCAAAGATCTT
TGATTCTCCTGCTGTTACTGACTTTCAGATCAGCAGCATTCATGGAGCAATTAATAGAATTGTGGTTTATATGACAACA
GGGAAAGCATTTGAAAGATGGGAAAGGATTATCATTTCAGGTTCTTGATAAAGGCAAAAAAATCTAAAAAGATAAAAGT
AATTTTTCAATATTAAATGGAAAACTGGTTTGCTGTTATTTCAATGTCCATTTTTTTAAAAAAAATCTGCTATTAATAT
GAAATAAAATATTAAAATGCCAACTTCAAATAATTTTCCAGAAGGAAAAAAAACATTTAAATCATATTAAGAGGATAGT
AAATATAAGTGTATTAGGAACTATAACTTACCTAAGTGCATAACATTTCATAGTAGTTACTACTTCTTAAAAACAATGA
GAAATCTGAACTTTACATTTCATAGTAATAAAATTGACCTCCCAGATTCACGTTTTTCATTATCAAAAATAGCTCTGGC
CGTTATTCAAGTACTTCTTGTGATAGAAAAAAGTTTTTAAAAATCAATATAAATGTAACAATGCAAGCTATTGGAATGG
AACCCATTAGGTTCTGTTTTTCCAGGTAATGAATTTTTGCAGTCCTATTCTCTCAGCCTGAATACTTCTCATCTTCTTC
TTCCTCTCCTCATCTACTGGGATAATTGTCATTCATTCTTTTGGTTGCAGCTTAAATAAAATTTCTCTTGGAGCATTGT
CCCTGATGATACCCAACATAGACACACACCCACAAGCCCTAATCAAAGTGATGTGCCTTTCCATCTCTGTCTGATTGTA
CCTTGTACTTGATTCCTATGTTAGCACGTAGCTCTCTGTGCTCCTGTTGCCTGTTTGTCTGTTGGGATGCTCCTGAACA
CTGTCAGTTCCCAGTGAGTAGGAATGTAGTCGGTTCACATTTGTATTCCCTGTGCCTAGCATAATGCAGAGTCTATCAG
TCTGCAAAGGCCTGTTCGCTGAAAGGGCAAAGTAGTAACTCAGCATGTAAAATCTGAGGGCATGCTTTGAGGTACCTGT
TCATTACCAATCACGTTTTCTATGTAACGTGGCCGTGCAATGTCATACTGACCTCAGCGGCCCCCTTGGGCTTTGGGGA
TTTGGTAGCTTGTAAGGTCAATCACCTCCCCCTTAGAAAGTCTCAGCTCTGCAGAAGAAATGAAGTTAACTGGTTGTCA
CTCCCAAACTTTTTAGTCTCGAATTTTACCCAGGAAACTGAGATTTTTGTCTTTAAAAAGTGAACAAGAAACTCCCTTT
ATGCTTCCTTTACATGTGGTCACCTGGGTACCAGCATTTAAATCTGTGGCAGGTAAATAGTTGATCAGTCAGGCTCCAG
AGACGATCTGAGGCCTGTTTCTATGCAAGACAGAAGTTTTCAGCTGACATACAGGGATGGAACAGATTGAAATGGAAAG
GAGGAGCTAGAAGAAAACAGAAAATCATAGCTTGAGCCTGAACTTCCTCTCTGCCTTGTCAATGCCCAGGGTGACATCT
AACCAAACAGTATTATCTGGCAGACTCTAAGTAAAGGCCACTGTGGTCTTCCTTTTGGTCAATGCAAATTTGTGCCTCC
ATTACTGATTCAAACCAAATCGGCTTCTTTGGGTATCAGAATAGTAGGATTCAATCTATTCACGGCTAAACTCGATTCT
GTTCAGTGAGAACAAAGTGCTGTAACTCTGCCTCATCACATGATGACCCTGGGAGAATCAGAACCTTTCCTGCTGGGCA
CTCACAGAGCCACTAGAACATTTCCAAGCTCATCCTTGGATTTTATGGAAGGCATGTGCTCCTTTGCACAAGCCACCCT
TTTTATTTGCTGCAGAAAAGGAGTCTAGGAAGAATGCATTCCAAACCCAGCCCCTGGGTGGGTATTCAGATGCACATTG
CTGACTTGTTAACACATTACTGCTTCTTGTCACCTTGGGTTTTTTGTTTTTGTTTTGCCCTTGAGATTTTTTATTCCAG
AAGTGAGTTCTGGCTCATCTGTCATTAGAGGAGGTATCGAGGCAACCATGGATCAAAGTATTAATATTTTCTGCTTGCC
ATTACTTGTTCAGATATCAAGTTCCTGAGTACCAGTTAATTGTAGGATTGATAGTAAAAGGAGATAATTAGAATTGAGT
CAACCATTTGGTTTTCCAAAACTGTAGAAGAGTGTGAAAATATTTATTTAATACCATTCCCAGACAAAATCAATGGTTT
CTAAATTTTCACAGAGCAAGGACTAAAAAGGAGTAATCAGGATATCAATTATTTGAATGATAAACTCTTAGCCAGAAGG
TAACAGATAACACCCTGTTACACACAGCAAGACCCCATCTCTAAAAAAAAAAAAAATTAATTAGCCAAGCATGGTGGCAT
GCACCTGTAGTCCCAGCTACTTGAGAGGCTGAGGTGGTGGGGGGAATCACTAGAGCTCAGGAGTTCTAGGCTGTAGTGA
GCTATGATCACACCACTGCACTCCAGCCTGAGCAACAGAGTGAGACCCTATCTCAAAACTTTAAAAAAAAAAAAAATTTA
AGAAGAAGAAGATAATTACTGGTATATAGACCAGAGCTATTTCAGAGCAGCTGCTTAAAATATTAATATTTTGGTTTAT
CGAGTTTAAATTCTCCCCATTTTTCCCCCAACCATTTTATTTTATAACTAAAAAAAACTAAAATAATTCAGAAGTAAAA
TTTGGTGCATTTTCAATCAAACACAAAATTTTAATCCCAAATCGATACCAATAACCTTAGGAGCAATGAAAGGGAGCCA
GAGGCTGAGTGGAACCAGTGAGAATTTACAAAATCCCAGGCTGCTTTCCCCAACTTTCCCCCACCCTGCTAAGAAATTC
ATCATCTCAGCAAGGCATATTTGAAGAGATTGATGCCATTGGCACATATGTGAGGCTGTGCATGCAGGTTCCACAAAAA
CATCTCAAACTAAGGCAGCAAAGCAGAGCATAGACCCTAGGATCACATTCGTTTAGTTCAAATCTCAGCTTCGTTACTT
AAAACAAGTTCTTCAAATTCTCAAAGTTTTGTTTTTCTCATTGGTAAAATGAGAACAATGAAACTTACTTCCTTAAGGC
TTATTGTAAGGATTCAATGAGATAATTCATTTAAAGTACTTATTTAGCAATGTCTGATCCACAAGAAGTGTTTATTAAG
TGTTCACCCTTGGTAGAGGCAATATATATATAATTATTATATACCTAATATATATATATATATATATATATATATCAGA
CATCTTTGAATGTATCTAAAAGTGTTTTTTAATCATTATATTTTAAAAGCTGTCAGTTACAAGTAATAACTTTATAAAG
TTATATTTCAAAAATGTTGATGGATACTTTATAAATGATATTCTTTTCAACATAATTTATTAAGCACTGACGGAATACT
GGATGCATTGTGCTAGGCTCTGTAGGGAATATAAGTTAATCAGACAGCATGCTTTTTTTTTTTACTTCAAGGGGTTTAT
AGTCATTTTGTGGAACTTGGCAAACATCTGAAAACTTAGAGAACACAAGATATAATTTATTTAAGTACCTTTGGCTTAG
AGTATTTCTAAAGCTTCTATAGTATCTATTTGGACAAGTCATTAATATACCTCTCTAACAAATATATCAGAGGTGTTTT
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ATAATGTACAGGCAATCACGAGAATTTAGGCCAACAATAAAAATTTCTTAACCCTGTATTAGGGAAGACAATTATAAAT
TGACTGCTTTTTCAAATTCAGAGTCTATAAGCTCTGGCTTCAGCGAATAAAGTCTGTAAGAATTTCCTCTTCTCTCATG
TCCCAGTGACACTTACATCAGCTTTATTTACCCCAAATCAATCACTGTGAGATTTACCAGTTTTCTTTTTGGACATGTG
TGATCTGAGCCATAATACAAAGAACGCCTAGGGACTTGTCTGGCTAGTCTGAAAGAAATCATTTGCGTGTCCAAACTTA
AAAATAATTCTTTAAAGTAAAATGCTATATCTGAAATGACTCAGAGAGTGATCAAATCAATAAGCCCCACATATTTACT
GCTTTGTGTTTTTCTGTCTTTGTCAGAAGATCACCCATGTGCAACCAACCATCCATCAACAAAGCCACCATAACAGGTA
AGAAAGATCTGGAGCTTATTCTTCATGTGTCTAGGAAGAAACCATTTCTGCCAAGAGTCAATATAACACCAACACCAAT
TTCATGCTGCAATTTGAAAATGTTAAAGAAATTCTTTCTTCTCTACATTATCATTTCTATCATTGATCTCACAAATTGT
CTAAGCTGTTATTTGGAACATTTTTACCGATTTACGTTTTTTACTGATGTACATTATTTTTAACCATTTAACTATGTGC
TTATACTCATTTGAGCATTGCTCTGGGCATTTGTATTTTGAGAGATGATGTTACTTTCAAGTCACTTCCCATTCTGGTT
CCACACATGTGTTATTAGCATGATATAATATGTCATCATTTAGTTTAATAAGAGTGAAGGCATAAATAAAAGGAGTAAC
GTGTTGGTTCATCAATATCCCACTTGTGTGTAGGAAGCAACATTGTACCAGTAGTCCAATAAAGGACTGAGAGAGCTGA
GAATAAACTCAGTTTGGGAGGGGAGAGAAGTTAATATACAATGCAGAAAAAGTTCAATGAGATCAAAACGTTGGGATCT

Fig. 9.301

ATAGATGTTTGGGAAAGAAAAATAGGAGGAAAGATGAGAGGAGCCAAGTGCATAAAAATAAAATTATCTCAATTCCTAT
TAGTCTGTTTTAGGCACAGGACTTGACCCCAGCTGAACCAAAAACAGAATGCATGATCTCATTTTGCTGAACCTGAAAC
CAAATTGAACTCTTTTGACTATTTCTTGAAACCCCAATTGATTCATTAAAATAATTGCCTGGAAAAGAAAACCTATGTT
TTCTAAAATTATTACCAGAAGAAAATTAGCATATTCTCCAAACTAAAACAATTCGTCATTGGATTCAAGTGTCTTCCTT
GAGCTCCAACCCATAATGTGCTGAGGAGCTCTTATTAAGTTATTAGTGAGTACACTTTGCTTGAAATTTAACTTTATCA
TGTCCAGACGTCTGTCTGTGTTTGTGGTCACCACATTAGAGTTGATTCTGGAATCATTGTTAATGTCATCTTTTCTGAA
TGTCATCAAGTGAAACTTGTATTTCAATGAATGTTAAATTATTGATCTCTTCTTCATGTTTCTCTTTCAACATATTATT
GGTGATGACTTCCAATTATCATTTTATAGTACATATATGGTTAACCAGTTTTGTTCTTGATATTGATCAAGAGATGAAC
AATAGGGCCAGGAGTGGTGGCTCACGCTTGTAATCTCAGCACTTTGGGAGGCCAAGGTGGGTGGATCACTTGAGGCCAG
GAGTTCAAGACCAGCCTGGCCAACATGGCGAAACCCCATCTCTACTAAAAATACAAAACTTAGCATGGTGGCGAGCACC
TGTAATCCAAGCTACTCGGGAATCTGAGGCAGGAGAATCGCTTGAACCCAGGAGGCAGAGGTTGCAGTGAGCCGAGATC
GCGCCACTGCACTCCAGCCTGGGCAACAGAGTAAGACTGTCTCCAAAAAAATAAAGAGAAAGAGAGATGAACAATAACAA
TTCCTATATGCTAAAATAAATACTTTGAGTAACTGATTTCTTCTGCCAAAATTCAAATTCAACATAAATGAGTCTAAAC
TGAGTTGGAGGTGTGGAACCGGATCCCTCTGTTTCTATGCACTTTCCTAAGTTGAGGAATGGACAGGCCTACATTTATG
AACCTGTACCTGAGGCCTCTAGTGAGAGAAGCCACATGGAAGCTGGTCTTCACGCTGCTCCAGGCACTAAATCTGACCC
CTATCAAGAGGAACTACCCTCAACCCCCAATTTTGCAATAAGCAAGAACTGACATTGCTATTTGGGCAGAATGCAGTGC
TATTTTGGTCCCTGGAAGCTTTTTTAGCTTGAGGTCACATATGAGCTGGCCTCACAGGTGGAGCAGCATTCTCCCAGAA
GAGCAGCATCAGGTACCAGTGGAAATTGTTGTGGCTGACAACAGATGGTTGGGTGCTCAGTGGTCAGGGCAGCTGCCCA
GCCATCCCAGCAGATGCCAGGCACAGATTAACAGGAGAGAGTAGCTACACTCAAAGGGCACACACTTGATCTTAAGCAT
ATGTGACAGACCTCATAGAAGCTCCTAGAAATGTATACATAGTAAGGGGGTCCTGGAGCAATACCAGAGGGAATTATGA
GCCACAGAAATTAAGAAATTAAGGTGAATATGGCCTCATTCGTACCCACAAGCTCCTGACCTGAGGCCTAGGGACAAGG
GGGACACAGAAATACCTTATCTAGAAAGGGAAACTAATTAACTGTTGTTACCACTTAGTGCTGCTGGGCTCCTCACAAA
GCACAACAGGAAATGAACTGACTAAAACTGGGAAGTCGTTTTTCTTGCCCAAGCATAGCAAACCAAGGTGGGAACATGG
CATAGGGATGGAGGGATGAGGGCAGTAGCAGGGGAAGGTTCCCCTTTCTGAGCCCATTTTGAAAAAGTGGGCCCTTAAA
ACCTCAGTGCTAGTAATAATAATGATGGTTGAGATTTTGACATTAGTAAGATTTGAGACACTCAGAAAAGGCAGTGCTT
GTGCCTTTCCTCCCTCTGCAGCTGACCACTCAGGCCCCACCCTCTAGGCTCACTCCCCCTGAAGTTGGAACCTGGCTGT
ACTGTGGCAGTAGTCCTGGGAAGGGCAAAGAAGTATTAAAAAGAGTCAGTGAGGCACCCCTTAAGATGAATGGGTCCCTG
TTGATAGGGGTCAGACCTAGTGCCTGGAGCAGCATGAGGACCAGCTTCCATGTGGCTTCTCTCACTAGAGGCCCCAGGT
ACAGGTTCGCAAATGTATGCCTGTCTATCCCTCAACATAGGAATAAGGTCTAGAGTAACAGTGTAGCCTAACAGTTAAG
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CCCTGGGCAGGTTGCATACCCTTTCTCTGCTCAGTTTCCCTACCTATAAAATAGTGACACTGCTTCCTGCAGTTGTTGC
TGGCTTGAATGAGTGAACACGCATGATGCCCTTAGCATAGTGCCTCACAGAACCAGCACTTAATACATCTTTTTAAATT
CCATTTTGTTGTTATTACTTGGTTTTGTTTCTAGGGCCCACTGTATACATAGAACTAGGGGTTTCTTCATCAATTCAGG
CTGCCATAACAAAGTACCATAGACTGGGTGGCTTATAGACAACACAAATTTATTTCTCACAATTCTGGAGGCTGGAAGT
CTGAGATCAGGATGCCAGCATGGTTGGGGTCTGGTGAGAGTCTTCTTCTAGGTTGCATCAGTGCCCCTTTGTAAAGGCAC
TAGTCTCATTTGTGAGTGTTGAGTGCTCCACCCTCACGACCTAATCACCTCCCACAGGCCCGGCCTCCAAATACCAACA
CATATTGGGTTAGGATATTGAAATGAATTTTAGGGGCACACAAGCACTCATTCCGTAACAAGGGGGTAATGGAAAGAAT
AGGACAAAGACACAAACGAAGGAAAGGGAACAGTGAGAGAAAGGCAAGCTTGCAAGATCATGAGAGGAAAACTTGTGGG
TCCTTAAATTGGCCAAAATGGATGCGCTTGCTTTGTGCCCATCAAAATGGGGTCTCCTCCTGCTCCCAGCACTGTCTCC
TTTATTCTCATCACAATTCACAGACGCTGGTAGCTTTGTGATAGAGATGATACACTGTTGTTCAGGATGAATTTCTAAG
TCTAAGAACTCACTTTTGAGTCATAGTTGTTTGAAGGAGAAATATTAATTCTCTATCACTTTTCTGTAAACCAACTCTA
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TTTACAATACCCTCTTCCTCTTTTCAAGGTTATTGCATTTGACATGTATTAAAGCCAGGAGAATTTGATTTTTTTTTTT
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CTCCTGGGTTCAAGCAATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTACAGATGCCCACCACCACGCCCGGCTAA
CTTTTTGTGTTTTTAGTAGAGACAGGGTTTCACTGTGTTAGCCAGGATGGTCTTGAACTCCTGACCTCAGGTGATCCAC
CCACCTTGGCCTCCCAAAATGCTGGGATTACAGGCATGAGCCACCACACCTGGCCGAGAGTTTGATTTTATAGCATTAG
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AATGATCTAACAATTCCTTAAAAGTAAGGCTTTGAAGTTTGCATTTATAAAAGAGACTTAAATAGCTCTTTTGCTCTTT
AGTGTGATATGACAAAGATGATGTGTGGCATTTGGAGCCTGAATGTGAACCCAGTCTCTCCTTTTTGCTTCATTTCCTC
ATTTTGGAGATTTGAGTACCTAACACTTAGGACTGTTGCAAGAATTCAAGGAGATAAGTTATATAAAAGGATAGAGTTC
AAGTTGGGCATGGTGGCACACCCCTATAATCCCGGATATTCAGGAGACCAAGGTGGGAGGACTGCTTGAGATCAGGAAT
TCAAGACCAGCCTGGGCAATGTAATGAGACCTGTCTCATAAAGTAAAAAAAAAAAAAAAAAAAAAAAAAATGGAGCCGGG
CATGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGCCCAAGGCGGGTGGATCACCAGGTCAGGAGTTCAAGACCAG
CCTGGCCAAGATGGTGAAACCCCGTCTCTATTAAAATACAAAAATTAGCCAGGCGTGGTGGCAGGTGCCTGTAATCCCA
GCTACTCGGGAGGCTGAGACAGGAAATCGCTTGAACTCTGAGGGCGGAGGTTGCAGTGAGCCGAGATCAGGCCACTGCT
CTTCGGCCTGGGTGACAGAGTGAGACACCGTCTCAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAAGAAAAAATGGATAG
AGTTCCGAATGTGATGAGGAACTCACCAAGTGTTTCTTCCTATAACCCTGTCCCAATGCCTGACATTTTTTTGTTCCTA
AAGCTAATTTAAAAACTGGTAGAATAGAGGTAACAGAGAATATTGGTATGTCAGCTTCTTTGGTACATTTCATTTATGA
TTTTGTTTTCACACAGTCATGGCATGACATTTTTAGTAATCCTTTTATCATTTAGAGTAAGGCTCACCTACATACGTCC

Fig. 9.302

TTAATGTGTGGTGCACACCAGAAGTAAAGAGTGCATTGGAACATGAGAGGGTGGCAAAGAGTCAGAGATGCCCAAGCCA
TACCTGCACTGGGACAGTGATCCCATTTTTGAAGTACAGCCATGTAGCTTGGAGCACAGTCCTTCCTTGTAAGCATTTC
ATTTTCGAACAACCTTAGCTCAAGGCAAGCATTCTGCAGCCATCTCATTAAATGTTACATCTTCACAATACCATTTTCA
ATGCTTCTGAATTTCCATATTTCCAATATGTTTATTTAATCATCCTCAATTAGAGGATTTTCATGCAAGGACACAACTC
TAAAGAAAACGTATTTAAATATCTTTATTTAAAGATGAAAAAACTGAGACCTAGTGAGAGAGGGTGCTGCTTAGTGAC
AATGCCAGGAATAAACATGTGGTTCCTTTTTCGAGTCCATGGTCCTTCTTACACCTTTATAAAGTAAAATAAACCATTA
GATTCGGGTGGCCTTTATACCCACCGTGGAAGTATATGCTTTAGAGAAAGTAAATGAAGTATTAATACTAACTCCTGAG
TAATAGATGTGGCATTGTATTATTTGTATATGAGCTTGAAAATTTCTCATCCCAACCTCTCACTGGACATATCTCTGTA
GTTATAGCTATTTTGATTATATCTACTGCTTATACCCCAGAGGCATAGAGACCAGCACCCTAAAGCAAAAGACTTCTGG
ATTTTGACTTTGGAAAATACAAATTCTTCTACAGGAGCGGTGAAACTAGTACAGCTGCCTGCTCTTTACCTGTAGGGGG
AGACACATGATGCAGTGACAAGCATAGAACAGCACAGAAGTGGTTTTAGTCCAGAAAATAAATAAATAAGTAAATTGGT
CTAAGTCTTCATTCCTTTTTGTATTTTTTTACCCTGAAGATTCATGGCTTCATTAAAAACAGTAAGTGCATTCTAAATA
GAATTTAGTCAATTGGCACGTAGAAAATTAAAAAGTAAACTATCCAAATAATGCTAGTCTGTCAAAACACAATGAGAAG
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AACTATTTCATGGTGACAATAAGGATGCTGGCTACTTACTTAGATCTGCCTTTTAAATCTGTGTGTGTGTGATAAAAGC
AAGTAGTATATATATAGTTTTTTAAAAAGAAATATAGAGAGATCTAATAGATGGGAGCAAGAACCATATAAAGAAGGCAAA
AGGGATCTACATGAGAGAAATATGTAAGTCCTCAGGAGATACTGAAGTAAAACATGTGTTGTGTCAGTGTATAGGGAAG
ACAAGAGACCCAGCCATTGCCAGAGAAGCCCTACTTCCTCATCAACCACCAGCAGGCAGCAGCTTCATGCTGTAGTTCT
TTTTTTCCTTTAATAGAATAAAGATTGTGGCCACACTTTAATAATTGCCAGAAATATGTGTTCATTAAGCTTTTTAAGA
AATGTGATCGAAAAATGCTGATGATACATTGTGTTTAATAGCTTTAATAAAAAACTGATAAAGCATCTAATACATCTAA
TGACTGTCGGATTTCCTAAATCTTTTAAGCTGAAGGAGTTTACTTTTACAAAAATCCTCATTGAAAAAGAATCTTCCGG
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AGTAAAAGTCAGTTCTCTTTCTTACAAATGAATTTGTTTTGGCCTTTTATGCTTTTATTTAATGAGTAGAGCCATACCT
ATTAATATATATAAAAAGATCAGATCTGACACCGTGGCTTTTTGACCAGGAATTGATTGAAGTTAGACTTGTTTTAAGAAT
AGTGAAAACAAGGGCTATGTCCTAATTATGAGGGGAAATAATTTAATTGTGTCTCTCTTGTCTGAATATCTGATTTGGA
TGCTTTGTTATAACTTTAATTGAAATAATTAAATGGGGCTCATGTTCATTTAGCCTAGCAAAAAGGTGATGAGCTAGCA
TATATGTTAAAAACCCAGCTTTCCTCTTAGTAGTTGTCTAATTTTGGTCAATGTACTTAAATTCTCCAAGTTTTGGGGG
TATTCTTTATCAGTAAATTCTAATTCAGTGCTTAACATAGTACTTGGTACTCAGAATGTATTCAACAAATGTTACTTAT
CATTATTGCTATAATATTATTATTATTATTATCTGCTTGGTCAACAGTATTTTCCATGCACCTTATATATGGCATGCAT
ACGCTCTGGAGGTAAAATGTGACTACTGGTTCAAGAAATTTACAAAGTAAGGGAGAAGGAATTATAAATAGTTAAGTAC
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GTTGCCCAGGCTGGAGTGAAGTGGTACGATCTTGTCTCATTGCAACCTCCGCCTCCCAGTCTCCAGCAATCCTCCCACC
TCAGCCTCCTGAGTAGCTGGGACTACAGGCATGCACCACCACGTGTGCATAATTTTTTATTTTATTTTTTGTATTTTTT
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AAAGTGCTGGGATTATAGGCATGAGCCACAGAGCCTGGACTGAAACCTCTTTAAATATATATATATTTATATAAATATATA
TTATATATATATATACAAAATATATAATATATATAATATATTATATATTATATATTTTATAAAATTATATATATATTTCTTAT
ATAAATATATATTTCTTATAAATTGTATAAATATATATTTATTATATATTATATACATATTTATTATATATATTTATTATA
TATTATATACATATTTATTATATATGTATTATATATTATATACATATATTATATAAATATATATAATATTATATATTTA
TTATATAAATATATAATATATATAAATATAATTCTCATATAAATAAATATAACTATTTATTATATAATGTATTTCTCATAT
ATATGCTTATTATATAATAAATATATTTCTCATATAAATATATATGTTTATTATAAAATAAATATATATAAAATATATATT
AAATAATTATATTATATATTTAATATATAATATATATGAATATGTATTCATATATAGAGAGAGAGAGAGAGCCAGTGGCTC
TACCTAGGAAATGCTCCCTGATAAATTTGAAGAACATAATGCTTTCCATGTGGTTAGGGGAGGATTGAGGATTACCTCA
CAACAAAAGACCAGCAAGAATAAGGTATGGAAGCATGGAATGCCTGTCCATATCAGGGGACTGGGAACAGTAAAGGACA
AATTGAGTTAAAGGTGTATAGGAGCAACTGAACAGGATGCTCCAGAGGTAGATTAAGGAAATAATATTTGAGGCCTACA
TAAATAACAGTGGACTTTATTTTATGGACAGTGGAAAATCATTGAGCATTTCCAATCGTAGGAACAAATACACATTTCA
GAATGACAGTAATTGGAAGCAGTGTAGAAAGAGATTGAAAAGAAGAAAGACTAGGGGCAGCCCCATACTCTTCAGGGGG
CTGTCACAGGCCTTGTACAGGATCAAGATAATGCAGCTCTGAACTGGGGTGGAAGTGGGGCTGTGGAGATGAGGGAATG
GGTTCACAACTCTTCAGAGATAGGATTGAAGGGACTTGGGGGTTGATTAGAGCAGAGACTGAGGATGAACAATTTTAAA
GTGAAAGTATGAGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCAGTTTGGGAGGCTGAGGCGGGTGGATCACCTGA
GGTCAGGAGTTCAAGACCAGCCTGGCCAACATGGTGAAACCCCATCTCTACTAAAAATACAAAAATTAGCCAGGCGTGG
TGGCACGTGCTTGTAATCCCAGCTACTCTGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGCAGAGGTTACAGT
GAGCCGAGATGGCACCATTGCACTCTAGCCTGGGCAACAAGAGAGAAACTTCATCTCAAAAAAAAAAAAAAAAAAGTGAA
AGTATATATACACATGTTCATTACAGCACTGTGAATGTGCATAAAGGGTTAAAAACAATCCAAATTCTAAATAATGTGT
GAATTCTATTTAGGTAGGGGTTAAAAAATTCCCATAATAAAATGATTTTAAATAATTTATTTTTGAGAAAATTTTAATA
ATATGGAAAAATGTTTGTATTTTAAGGAATACATAATAAAGTGCCATGTGGGCAATAGGCACACATTTAATGCACTTTA
ATTATGTATATTGAATTGAACTTAAGTTACTTTTAGTTGTTGACCAGTAGTTAGCAAAGGTAGATAGGTTTACCATTTT
ACATTGAATCTAGTGACAAACATGTTATTTCTCAGGTCCCAGTTGTTAGTTTGCCTCTCCTTGCCTAGAAAGGGCACTG
GTGAGACCCGCCCTAACAATATTTCAATATTATGGTTCCACAGTCCAGCATTAACTGTATTTTAAAATAATAATATCTC
TCACATAGGGCAGCATTTTATGGATTATTGAGCCTATGACAAAAATGTTGTATTATCCTTCAGATGATCAGAAAAACTA
CCCTTAGGGCTGGGTGCAGTGGCTCACACCTGTAATTCCAGCACTTTGGGAGGCAAGGGAGGAAGATGGCTTGAGGCCA

Fig. 9.303

GGAGTTTGAGGCAAGCCTGAAACACAGTGAGACCTCCATCTCTACAAAAAATTTTAAAAATTAGCTAGACATGGTGGTG
CACACCTGTAATCCCAGCTATTCAGGAGGATCATTTATGCCCAGGAAGTTGATGCTGCAGTGAACCATGATCATGCCAC
TGCACTCTAGCCTGGGCTACAGAGCAAAACTCTGTCTCAGAGTAAGAAAAGCTACCACATGAATAAAAGATCTCAGTGT
CACCAAAGTCCACTCCTGCCAGCATCCCTTCCCCGCTGCCCTGAGTTTAAAAAGAGCAATACTTCCCAAACCTGTCTCT
GATCAAAGGAATCCCCAAGGGCTTCCTGAGAACAACCACAAAATGACTGATTCCCAGACTTTCCAGAACTGAATGTCTA
GGATAAGGCTCAGGATCTAAATTATTAACAAATACTCCCAGGTGAATGGGCTTGATTGGCCAAATTTGGGAGAATAATG
GAATACTGAAGAAAGCAGGTGAGAGGGCTGCCTGTGTACAGTGTTGTCATTGAGTTGATGATAGCTTGTTGGAAAATAC
CTGTCTTTCTGGAAAGTATATATAGTGACACCCACACCCTCATCTAACAAACAGTGCAGCCCAGGATAAGCACGATCAT
ATGTGCAAAGTGCTCCACGATTAGTGAAAGAAGATACAAGGTGATATTATTATCTGTGCTGACTTCGTCATCCTGGGCA
TCAGCGTCAGGGTCATCATCTGTTATCTCTCAAAATACATACAAGATTTTAAGTAGAGCAGCTTGCTCGTCTCTGAGAA
GAAAATCAAGTATCACATCTACCTTTGTGGATGTGGGAGGGAGGGAATTTGGGAAATGTTTAGTAATTGCATTCTTTTT
GTCTTCTTGGACACAGTACCAAGTCTCCTTAAACTAATAAAAGAAAAAAAAAAAAATAAAAGAACCACACAAACTGCATT
CTTCAGTCACTCCCTTTCTCCACAAAGTGCTTCCCACCCATTTCAGCCTTAAAAAATATTCTAGGCATACTCAGAAATA
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ATGCTTTAAAAATCAGTTGGATATATTATTAATACTAATATTAATAAAAGTTAACATTTACTGACATTTGAAATGTACC
AAACACTCTAGATGAGTAATCTTTTTAAACCTTATGATATCCAAAGAGGTAGACACCGTTGCTATTCCTGCTTCATAGA
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GGGAGAATGTCAAGTCCTCTCCTAAAATGTACTGGCATGTACACACATACACAAGCTGCTGGATGTGCTGGTCCTCAAA
AGTTATTCCCTAGGGACATCTCTCTTCTTTTTTTTCTCTCTCCTTCCCTCCCTCTCTCTCTCTCTTTCTTTTTCTTTTT
TCTTTTGAGAACAGAAAACAAATCTATACCATCTATTCCTGAATGTATATGAGTGGAGGGTAGGACAAGAGGAGGGATM
AGATCTGTGGATGCACAGAAACTCTTTGGGAAACCCTAAAAACTCTCTATAGTTATATAAGCTAAGGAAAGGATTCCTG
CCAGGGGGTATAGGATTCTTCAATTCCCACACTTCTCTTCCTGACTCTTCTGAAGTGCCCGTTGTCACCAGAGTGCCCA
GGGGCAGAGCATTGACAAGGAAAGGCCCAGGTGTGTGTGAGAAGTCAGGCAGATGGGGTGTTTCGGAGGAACCAGGGTA
ACGCAGTGCTTCAGCGTTAGCACTCACCTTGCTTCTGGGACCACTTACCACGAAGGCCTGAAAGGGCAGGCCCCAACTA
CTGGGAATATTAATCTTCTCTTTGGGTGAAGTCTCTTCATGCCATTATCATCTCTTAGCTACCATTGCTAGGCAAAAGT
TTCCTAGCTCACCATGTCCTGAATGCACTTCCTTGAGATATTTCTGATGCTTAAATATCCAGTGCTTTCTAGTGTGCCG
TCTTCCTTCTGTATTTTTGTTTTGTTTTGTTTTGTTTTTTTGTGGTTCCTTTTCAGCACTGTTGGTCCTGTGGAAGTAT
TTCTAATTGACTGTATTCTATATGCCACACAAAACAGATGGGTGTTTATGACATTCTTTTCTGGATATGTTTCTGATGT
TTGCATATTGAACACAGAACTGTCCACATAGAGAACTTGATTTCTGCCTCTTCCTGGCTTTGCTTTTACTCATTTAGTC
CCTAGTATGTGAAAGGCTATGCTTAGGCTCCAAGGACCCAAGGATGAATAAAATACCTCCAGTAAGCTTCAGGACCATT
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ATAGCCAAAAGGAAAATAGAAAAGAACTGGTCGTGAAACCGAGACCTCAGAGTTGAATGACAAGTAAGATACCTCTGAA
GTCACTGACAGTGGACTGACTGTTATTTGACTAATATTGCTTCTACAGAGACAGACCTAGGTTTTATCCTCCCATAGAA
AAAAATCTCAAACATTGGTAGGTTTTGTTTTTGTGTTTTGACATACAAGTCAAAATCTATGTGAAGGAGGAGGAACAAG
ACTCAGGGGTCAGAAAATTGGGGTTTCGTGGCTGGCTGTCCTGCTCACCCACTTTACGTGTGACCTTAGAAAAGTCACG
CCGATGTGTTAGATCTTTTCTGTTAAAATGTGGTGGGTAATAATTATACCTTCCTAATTTTGAGGAATTACATGAGATA
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ATATGTTGAAAAGTATTATAAACTACCAATAAATATTATTATATTATTCAATTACTGTTGATCCTCAAAACAGCCATCT
CTGGAAACTGTGCAATTATTTGAGCCCTGATGCCATTGCTGAAAGCATTTTGGAAGTGGCTTTAGAGACCATTTACAGA
CCATATAAGACACACACATACCAAAAAGCAATAAGCAATCTCACTGGTTTATAGTAACACTTCACTTATGACCAAAAAT
ATTATTTCCAATATGATTACCAACCCTATTCACCAGACAGAATGTCAAATTAGCTTAGATGGGGCTAACTCCAGAAATG
AAACCATTCTCAAGGGATTTTAAAGAGTTTTTAAGAAGTATCACATGGACTTTTAAGGCAATTCCAAGACAGGGAGCC
CTAAAATCATTACAATGATGGCAATGTGTGGAATAAGCATATAAACACATTTTCCCAGATGCAACTTTGAAGGAGACAA
AATCTGAATTCTAGGCAGTTTGTGAAGGAAAAGGAGCAATTTCTGGGAAATTTCTTTTACCCCTCAGCCAACCTCAAGA
CAGTCTGTCTTTCTACAGACCCTCCCTTGCTGTTTCTCTTTACTGGAAACTGTTGAGGGTACTGGAAATAAAGGAGAAG
GCCAATGTATCTAAGACCAGTGGATCAGAGAGGAGCCCAAGAACCTTCATCATTTCCACAGAAAGGGCAGCAGAGGAAA
TTAACCTGGCCTTTTGTCATGCTATTATTTCTCAGTGAGTCTATTAAATTATTGTGGCACACTAAACAGTGTTGTCTGC
ATCTTGTTCTTTGGGGATTCCATACAATTCTCCCCTTGGCTGGCTTATCACCTCCCCTTAGAAAATGGTGTCTCAGCAA
TGATCCTTTGCTTGCAATACAAAAAAACCAACTCTGCTCATTAATGCAAAATTCTTAGTGGAAGAATATAGGAAGAATT
CTGAATTCCCTGAGAATTAGTGGGGCGACAGGTGGTGGTGGGGGTGCTGGAGGACGAGGTTTGAAGGAATCAGTGCATC
TTTACAGTGCTAGAAGGCTACAAATCAAGGGGAAAGTCTCATGGCAGGAGTAGTCGAGTGAGATCCCCACAACTGTTCT
TAGTTTCTTTGTCATTATTTCAAGAGTCAAACAGCAGTGAAGGGATCTAATTTGTCTTGTTTGCGTCCTGGGCCTTGGC
TAAAAGAGAACAGGCAGGTGGCTTCAGTTCTACCAAACTATGTTATAAAATGTGGTAGTAAGAGCTGAATGATGGGACC
AGATTTTGTGGGTTCATATTCTAGCACTACGACTTACAGATGCTTGTGCTCAAACAATTCATTTAACCTTCCAGAGCCT
GAAATTCCTCACTTTTGAAGTAAGCACAATAATAATATTTATCTCATAGGGAGTTCATGAAAATTATTTGAGGAGATAT
TTATGAAAGGCTGGGCATGGTTTGCTCACGCCTGTAATTCCAGCATTTKGGGAGGCTGAGGCGGGCAGATCACCTGAGG
TCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAACCCTGTCTCTACTAAAAACACAAAAAAATTAGCCAGACATGG

Fig. 9.304

TGTTGCACACCTGTAATCCCAGCTCCTTGGGAGGCTGAGGTAGGAGAATCACTTGAACCTGGGAGGCAGAGGTTGCAGT
AAGCTGAGATCGTGCCACTGCACTCCAGCCTGGATAACAGAGGAAGACTCTGTCTTAGGAAAAAAAAAGATATTTATGA
AAAATGAAGCAAAATGCATGGCTCACAGTAAGCACTTGATCATTGCTGGTTAACTATTATTAAGATTATCTAATAGGGA
TACAAAGTATATTCCTGAAAGAAATTAGGGTGCTCTTAGATAGGGGAAATAAATGCTAGTAGGATTGGTTTCAATGCAC
TATTTATTTTATTAATTTATTTCTCACTGAATTTCTTTTTATGATACTCATTTTTTTTAGAGATCCAGATGGTACCTGT
CATTAATGTATCCCTGAGAACTCAGTTCCTCTGAAGGCACAAAAATAATTTGACCATCTCATCATTTGATCCACACACA
TTTATTGATGCCTCTTTTATGCTTGGTTCTATACAAGACGCCGTGACGTGTGGCCCCTGTAGGAAGTCCTGGCCTCTGT
CTCTAAATCTGTCATCTCAGCCCAACCCCTATTCAGATTATCTGTGCCCTCTGCGTAGCCATTCACTTCGCCTGGGTGC
AATCATGCCTTCCTTACCCAACGTTTAACAAGTCCAGCCTAGCAACCTACATCATGCCATCCAACAGAAGGAAGGCATT
ATTGACTCAGAACAAAGTATAGGCGCTCTTAGAATAAGTTTATTAAATCATTTTTTTAAAAAAAAGATATGTGCTTTTT
CCCAGGGGAGCAGTGAGGCATTGTCAGAGGGTGGATTCATTAAATCAATACAGAGAATCCTGGCTGCACTATTTGTTAG
CTATTTGACTTTGGGAAAGTTATTCTCTGAGCCTTGATTTCTCATTAGAAGACGGGAATAATAGCAAACCTATCTCAGA
GCATTAAGTAAGAATTAAATGAAGTGAATTAAGCACGAAACCTAGCATCTGACGCATAGTAGGAACTAAAAAAGAAATA
CTAGTTCTTGAATAAACATTTTTTTCTTGACTGTACTGTGATACTTCCATCAGTGAGTTTCCAAGGCAAATGAATCATC
TTTAGAATTGGAAGCTCAATGTAAGCAACAATGAAGTAAAGAAAACAACTGAATTTCTCTTGAAATTATTTTCCTTTAC
TGACTTGTCTTTATTGTCTGTGTTCACAAGAAACTAGCTCTGACTGCAAAAATGTCTGCCTGTTTCTATGGCCAGTTCT
TTTCTACATGTTTAAATTCCTAATTGTGCACACAATCTTAGTCACAATATTTTCATGTGCAAGCAATTAAGACTCATTT
AACAGCCCTCCCTCTGGAAGGTTTTGTTCTCCATCTGCCACAAATCAGATTCCTTAGGAAGATATTTGATTTTGAAACA
ATGTTAAAGTACTGTTCATTTTGTTCAAATTTCATTTATGTACCATTTTTTAAAGTGATGTAAATGGACAGCCACAAAA
AGCTCAGCAGCTGGTCAAAACAAAACATCAAAGTCACCATTGAAATGGGGCAAAAAAATTAAAAACTAATATGCTGGGA
CAATGCCAAATAAAAACGATAGTCTGATAAACATTCCTCAGACACATTTTGCTCATAACAACTATTTCCTTTACAGCAG
ATTTAAAATATGGGAAAATAGGAATATACCCCAGTTGCCACTCTGAATCTTAGCTGTCCTGAGTTCACTGCAATGTATA
TAATAAGGAAGTCAGAAGGTGGAAAAGAGGAAAAGATTAAATTTGTAAGTTTTTTGAAAGATATATGGTAAAAAGTAGA
GGTATCCAACAGATTTGTACGATAGATTGTTCATTTAAGGACCAGGAGCGGTGGCTCACGCCTGTTATCCAGCATTTTG
GGAGGCCAAGGAGGGGCGGATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGAGAAACCCCGTCTCTAT
TAAAAATACAAAATTAGCCAGGCGTGGTGGCACATGCCTGTAATCCCGGCTACTCGGGAGACTGAGGCAGGAGAATCGC
TTGAACCTGGGAGGCAGAGGTTGTGGTGAGCTGAGATCGCGCCATTGCACTTCAGCCTAGGCAAAAAGTGAAACTGTCT
CAAAAAAAAAAAAAAAAAGATTGTTCATTTAAAAATCAATTCGATTGGCCAGGCACGGTGGCTCACACCTGTAATCCCA
CAGCACTTTGGGTGGCCGAGGCAGGCGGATCGATTGAGGCCAGGAGTTCAAGATCAGCCTGGGCAACATGGTGAAACCC
CCGTCTCTACTGAAAAAAAAAAAAAAAAAGTAGCCAGGCATGGAGGCATGGTGGCACATGCCTGTAATCCCAGCTACTTG
GGAAGCTGAGGCACGAAAATGGCTTGAACCCGGGAGGCAGAGGTGAGATCATGCCACTGTACTCCAACCTGGGTGACAG
AGCAAGACTCTGCCTCGAAGAAAAAAAAAAAAATCAATTAGATAAGTGAGAGTGTATATTCAGGGCAACTTAAATCTATG
CTCTCAGATTAAAAATAAGATTTAATTACAATTTTTTTTTTTTTTGATGCAGGGTCTCACTTTTTGCTCAGGCTAGATT
GCGGTGGCACAATCACAGCTCACTGCAGCCTCGACCTCCTGGGCTCAAGCAATCCTCCCACCTCATCCTCCTGTCTACC
TGGGACTACAGGCACATAGCACTGCACCACCATACCTGGCTAATTTTTAATTTTTTTTTTTTTTTTAGAGACAGGATC
TCACGATGTTGCCCAGGCTAGTCTTGCACTCCTGGGCTCAAGTGATTCTCCTGCCTTGGCCTCCCAAAGTGCTGGGATT
ACAGGTGTGGGCCATCACACCCAGCCAATTTTGAAGTATTTAATTTTTAAAATGAAAAATTGATTAGATAATAGTTCTC
CCTCACTACAGGTGAAGTCTGTTTTTATTTATTTGTTCAATGGGCTTCTTTAGAACATGACATAGAAGGCAATCCTTGG
TCAAATTAAGGCAGAAACAAGAATTTATTAGGTTCTGAACATAAATAACTGTCTGTGAACTGGTAACTCTCTAATTAAG
CATAAATGTGAAAAGAAGAGGATTAGCTCTTCTTGAGGAGTTGGAAATGGAAAATATTACAATTTGGAGAGGTAGCTTG
CAGAAACCGTACAGTTTTCTCTGCTTATATGCCCCAGCGTTGGGAGACTTGAAAGGAATCACCAACCAAGTTAATGCAA
TAAATTTCCATATATAGATCAATTGGATGTTTTGTCCCCAGCTTCCTAGGCCTTTAATAAACTGAATTGTTTTGGTATC
ACTGGATGAAAGGTTCTGTAAAAGTTCAAAGTATTGTTATTTGGGGCATTCACACCTGCATGTTTAAAATGCCTTTGTG
CAGAATGTAGTCCAATCTGCTTTCAAATCAGACCTTCAAAGAAGGGTAGATTCATCCATGTGACAGATCCCCTTAGGTG
CTTCTCTAAAAGAAAAAGTTAAGCTAGCAGGTCTACCCCCACTCATTATCTTTGTCTCTTTGTGCGTAATCATCAAACC
GCACCTCTGAAAAGAAGACCAAGAGAAAACTTTAGTATCTCTTTGCTGGAGATGCAAAGCAAGATATAGAAGGAACTGG
AAAATAGTTCTTAAGTAAATACAGGGGGAAAACGGAAATTGAGAGGACGTACTTTTCGCTAACAGTTGTAAACTAAAAA
TAAAATTTGAAGCACGCCTGCACCCTCACCTGAATGGACTTCCTCCTTGGCCAGGGCACTTTAAAATTTAACCTGAAAG
ACTGATTTAGGCCGCAAAGGAAGTCAGACATGCCTTATTTTACCCCTCCAGTATTAACATCACCACAGACCTTAAGTCT
GATAAGAAACATTTAGGATCTCTTTTCTTGGAAGCCTGCTACCTGGAGGCTTCATCTGCCTAATAAACCTTTGGTCTCC
ACAACTTTTATCTTAACCCAGACATTCCTTTCTACTGATAATAACTCTTTCAACCAATTGCTAATCAGAATATGTTGAA
ATCTACCTGTGACCTCGAAGCCCTCCCCCAACTTTGAGTTTTCCCGCTTTCCAGCTTTCCAGATAGAACCAGTGTAAAT
CTTACATGTATTGATTGATGTATTATTTCTTCCTAAAATGTACAAAAACAAGCTGTAGCCTGACCACCTTGGGCACATG
TCTTCAGGACCACCTGAGGCAGTGTCACACGTGCATCCTTAACTTTGGCAAAATACACTTTCTAAACTGATTGAGACCT
GTCTCAGATATTTTGGGCTAACACAATGAATATGAAAAAACTTTTTTGTTGGCGGGGGTGGGAGGTGGACGGAGTCTC
TCTCTGTTGCCCAGGCTGGAGTGCAATGGCGCAATTCGGCTCACTGCAACCTCCACCTCCTGGATTCAAGTGATTCTCC
TGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGCACACGTCACCATGCCTGGCTAATTTTTGCATTTTTAGTAGAGACA
GGGTTTCACCATGTTGGTCAGGCTGGTCTTGAACTCCTGACCTCATGATCCACCCATCTCGGCCTCCCAAAGTGCTGGG
ATTACAGGGCGTGAGCCACCACACCCGGCCAAAAACAACTATTTTTAAAGAGCATCTAAGCTCAGAAATCACAGGCATA
TTACGCCTGCCACTAAGGGAGTTAGTTCCATTGAAGGATATAATTAAGAGTGAAATGAATGGTGTGCTAAGCACTTAGG
GATAGTGGTTCACAAATTTGTCTGTTCCTTAAAATCACCTTGGGGGGCAGGCGTGGTGCCTCACACCTGTAATCCCAGC

Fig. 9.305

ACTTTAGCAGGTCAAGGCCAGAGGATCACTTGAGGCCAAGAGTTCCAGACTAGCCTGGGCAGCGCAGTGAGATCCTGTT
TCTACAGAAGATAATAATAATCACCTGGAAATTTCTTTTTTTAATGCAGCTAATGAAGGAAAAAAAAATCCGAGGTTT
TGAAACCAACTCAAAGACAACAGCGATATTCAAGCATAAGATGTAATAAAGGTTGTACACTAGATAGCTAGATAGCCAG
AATAAAAAGGAAGAGATAGTTACAAAAAATATAAGGAGGATAAATGTATAGGATTTCATAACTGCTAATCATATGATTT
TACTGAGTAGGTGTAAAATGCTTCTGATAATGTGTGAAAATTTATAATCCTTCGTATTATATGTAGGATAAACATAGGT
TAAGACCTGGATTCTAAGGCTGAATTTAAGGCTAGTTTATCTCCATCCTTAGATTTCCTACATTTCATTTAAGAGAAAA
TGTCCTGTATATTGAATATTCATGAAAATCTCTGAAAGGTGTTATGCTTATTCTTAACCTCTTAAAGGTGTACACTGAA
TGTAATTAAATCATTTTTGCTGGCTCTGGTTCCTCATGAACATCTGCTTTTGTACTTCCCTGTCATTCACAAATGCACT
TAGGAGCTAATGATCTATGAGGACTTTTTTTTCCCCTACAGTAACGAGCAGCAAATCTGGCTGCACTTTAATTTCTCAT
CTGCTGTCCCATATTGTCTGGTGGTCAGTTCATGATGTTACTAAGCTTGGCTTTATTGGCATCTTTTGTGAGCTGCTGC
TGCTTTTTCCTTGGCAAACCTGATTACCAAGCTATTGCATTGAGCATAAAATAAAGGTAAATTAATTCAAAATAAAAGT
GAAGGTTGAGGGCAATTCATTTCTGAGGTAGACCTTTAGGATATGAGATGCATAAAGTGAACAAGATCCTACAAGTGTT
TACTTGACTTTTCTGGGTTCTTTTCACCTACTTACTGATTTTGAATAGTATAAATTCCTGGATAATTAATCTGGATAAG
TAAGTCGTCACTGTACCTCTAGAGAAAATAAAATCAACCAAAATATGTTTAATTCTGTGCTCTGGGTTTCAAGAAAACA
AAAATGAATAAGATATAGTCCTACCCCCAAGGACTTGACACAATATAATTGTACATGTGCAAAAGAAACTGTCTAGGTG
TGGTGGCTCACACCTCTAATCGCAGCACTTTGGGAGGCTGAGGCAGGAGGATCACTTGAGCCTAGGAATTTCAGACCAG
CCTGGGCAACATGATGAAACCTTTTCTCTACAAAAAAAAAATACAAAAATTAGCCAGGCATGGTGGCACATGCCTGTAG
TCCTAGCTACTGGGGGAGTTGAGATAGGAGGGTTGCTTGAGCCCAAGAGGTCTAGGCTGCAATGAGCTATGATCACAGC
ACTCCAGCCTGGGCAAAAAATCTTAAGTAGTCTCAGGACTGTACCACAGAGTATCGTAAGAATTCAGAGGAGGCAAAGA
CCAAATTAGAATAATAAGCACATGAAGGCTTCCAGCAGAACATGGTATTTTTGTTGGGCCTTGAACACTCTTTAGATGC
TTTAGTTTAATGTGCCATAGTCACACTTTCTGTATTGGGAGTGTTAATGGGTGATAACTACTCCAGAGCTTTAGGATTG
CTTCCAGTATCCCAGCAAAGCAGCCCTTTTCAACTAGAACCGTTTGCTATTACAAAAGAGAGGTGATCACTTGTGATTT
CTTAACATTTCTTCACTTTGCCTCTGGCACTGGGCTTCTGAAAGTCCAGGAAAGAGCAATGACCTCAGGGTTTTAAGAC
CAGGGGTATAATCCCAGCTCTGCCTAGCTCTCTGTGTAATTTTTGGTCAGTAATTTAACCTGGGTTGTGTTCTGTAAAA
TGATGATATTGGATTAAATAGTACCTAATCATCTAACTTTTTCCTAATATTTTATTATTATAAAAAAATGCATGCCTCT
GATGAATTGCCTTTATCTTCTTTAGTCATATTTCCCTAAGAAGTGAATAAAAGATACCAAGGCAATGTGTGAATTCCAC
TTTTTCCAATCTGGATGTTTAGGGGATATCCTTGACACCATTTGCTATTTTGAGTTTTCAACAAAGAGTTAAAAGAAAA
TTCTGGCACTCCTATCTAGTCATCCTCTCCAGTTGGCAGAAGTCTTCATGTGGACTTGATGGTTGCCCAGAGCAACAAA
ATATTAGGGACAGAAACATGTTCAGGGACTCGATTGTATAAGTGACTCAGAGCTGAGAGACCTTTTCCAGCTTGACTGC
AGCCCATACTTAGCTAAAGTGGGTATTTGTCTATTCCTGTCTGCATACTGTGACTTGGAGATGCCTATTATTTTGCTTG
CTAAAATATGGAAGCCAACCTTGAAACTGGCAGAGAAGAGTTAAATGATCAGAAGGCAATCGTCTTCATTCAGCACGTC
TGACACATGAAAGATCATTAGGACTAGCAAATATAAACAAGATCAGGGAGTGGTCTTGGGCTTTGAAGAGCACATACCA
AGAACATCAAGAGAACTCAATATAAATTCAATATAAAAGCTACTATTCAAGGCCAATTATCTCTTTTGAGTTAGAAGAG
CCCAATGGAGAGCCACTCACGCAAATCAATACCCTTTCCTTCTCTCAGTTGGAGCCAGACATCTCTAACTATCCTCTGA
ATTAAACTGGATTTTTAAAATGTTTTTCTGTCCCTAAACTCTTTAAATCCTGAGGTCATCCTTTCTTTGTTCCATCAGT
CTGGCTCCATGATACCAATTACTCCAGCTTGTTAAAGCAGTTATTGGCATATGGTAGTCATGTCTTTTGTTTCTATGCA
ATGTTTCCTGGAGCAAGAATTGGAGGGAGAAGTATTAGCCAAGTCTTGTTGCTTTAAGTCTCCTCTCTTCAACTGTTTA
ACTAGGTTCCATCCTAATTATGTGTTTGGTTGGTTTTATTTTGATACCCAATATACATTCTTCTCATTTGTACATRAAC
AATGTCATTATGGTAATAATAACAATTATACAATATTACTTTCTGTCCTCATTGAATGTCATTATGATCAGGAGCTGGT
CCTCTTGGTTTGGACATTATWATTTGAAATGAATATTCTTTTTAAATGATTGGAAACTTAGTCGTAAATTCAAGTGGTT
TACAATAGTAACTCTTATCCCAGTAACCACAGCACCTGTTTAGAAAAATGTCTTCGGATCACTTGTTTGCAAATGTCTT
TTTCCTTAGGATCCTGGATGGAATTGAACCCATATACGTTACTTGACATGTGAAACACGTGTGACCCTGGCAGATGATT
TGGCTGACCTTGAAAACTACAGCTGTTTAGTCACTTTGAAAACAATGCAATACAAGTGATTTACTAGGCTTCAGTTTTA
ACCATTTTATGCTGACTGGTGGAAATTCTAACCCTTCAGAAAGAAAAAAAAATTGTGAAGCAATGGAAATGTACCATCC
TGGGTATTAATGTCATTAATTTTCAATACATTTTCTCACAAAAAGTATAAAGAAGTCTTTGCTTGACCTTACGGAAAA
AACAACATACATGTGGCTTTATTTTGCCTTTTTTTTTTTTTAATTAATGAAGAAATCCAAGATTTGACTTTTGTTTCTT
CTCTACCCAAATCAAAAGCAGTCTATAATCTCCTGCAAAGATCAAAGCTTTTTGCTTACTATAAAGTATGTGCCCTGCT
TAGGCATTACATGGTAGAAAGATAGCATTCTGTTCCAAGAAATCTCTATTCGTTCTCTAGTTGCTGTGTATATATTCTC
TTTTAGCTAGAATATGGTTAGTAAATGAGTCCTGAAAATTTCGCTGTATATACCAAAACATGTTGTATACCATAAATAT
ATAAAATATTTTTATTTCAATTTTTTAAAATTGTGCTTCAATCAAGACAGAAGTTGATTTCTTTTTCCAGAAATTCAGA
GTGAGCAGTCCAGGGCTGCTGTGGCTGCTCTAAAATCACCAAGGGCCCAGAGCTTCTTTCAGATAATTTTTTTTTAACA
TTTACTAGATTCATAGGGCTTTTGTCTTCATGGTCTGAGATGACTACAAGAGCCCTAGCCATCACAACTAAGTGGCCAG
CAGCAAGAAGGAGGAAAAAAGAAGGAATAGTACACCCACTCCTTTTAGAAAAGGCTTCTGAGAAATCCCACATAATGCT
TCTACTTACATCTCCTTGGCTCAAATTTAGTGTCTGCCACAAAAGAGAATAAGACACACACACACACACACACACACAC
ACACACACACACACACACATATATATATATATTTTTWTTTTTTCTGGCAAGTCTCTAGTTCAGGGATTTCAATCTCCTTTA
AGCAAATGAGTCTTCTCGCTAACCTCTCCCTCTGGCCTGCCCAGTCTCTCTCGAATCTCATTGCCATCCTGTCCTCCTT
ACTCACTTTGGGAAAATCCAGCTCTGTCAGTTTTACAGTCTGCCTTTTCCACTTCCTTACCTGAATTCCTGGGAAAAAT
AATCCCACATCACTTCAAGCTGGAATTCCAACAAAGTCAAGACCTGTCACCTCATCGGACTCTCAGAGCACTTGACAGT
TAGTTCCTGCTGTGCCCCTCTCTCAGTCCTCTTCATGCTAATTCCAAACCTGTCCTCTCTCTTAAGCCTCCCAAACCAG
CAGCTCTTCATCTCCTTTCAGCAAATAACTTGTTGCTTTTTGAAGAAAGTCTGTGTCAAGGCATGAACTTCCTCAGCTC
CTACATCCTCTTGCCATAGATGTTATCCATAGGTCTCTTACTGACATCCATAATCCCTTCCTCCCTTCTGGTCTCAGCG

Fig. 9.306

GATGACGTTTCCCTTCTCCCTCCTGCTCTAAGTCAACCCCTGCATCTGGGCCCTTGATCCTCTCTCCTCCCAGCTCCCA
CAAGTCCTTGCTTCGTCTGTTTTCCTTTCTATCTCTCACATCTTCAATCTTTACTTTTATTCTGGCTCTTTCCCCATTC
ATGTCTCTCACAATCTTAAAAACAATACACAGCAAACCACAGCAAAGTTCAGCCAACTCTTTATTGATCCTTTAGCTAG
TTCTTGATCTTCTCTTTTCAGTCAAGTTGCTCTACCTCCTCATCCCTATTCAGTCTGCAGTCCACTGTAGTACGACTTT
CTCACAACACCTCTGTTCCAGCTGCCCTCCCTTGGTTGCCAATGAACTCCTAATTGTCTTCTTAGTTCTTAGAGGCTTC
TTCTTCTTAAACTCTTTCTTTGTTCATTTACTGAGTAAATATTTATTCAACATGTTTTTGTTGGGAGCCATTTTGTTCC
AGATGTTTCCACACTCTTCTTGCTGCTCTGAATACTTCTTTTCACTATTCTTCATGGTCTCTCTTCCTCCCCACTTTAC
CTCTTAAATGTGAGTATTCTAGAATGTTCTTTTTGATTAATTGGTTTTCTCACTCTGTGTACTCTGTAGATGTTTTCAT
GTACCTCATAGTTGTATTTTCCATCTTATGAAAGTGGGTCCCAAAACTCTGTCTCTACTCAGAGTAGGCACTTCCCCAA
TTTCCAAATTTATTCACACAAAAGCCCAATGTCCATTGATATCCAACTCTTCAAATCCAATATGTCCAGAGCTGGACTC
ACATATTTCTTTGCAAATCTGTTCTTCCTATCTCAGTTAGTGAAACACTTTTAGCCAAGATCGAAACTTATAAATCATG
AATCCTTCTACCAAATCTATCTGTCTGTCTATATATATTTTTGAAACAGAGTTGTCTCACTCTGTTGCCCAGGATGGAG
TGCAGTGGCAAGATTTAAGCTCACTGTAACCTCCACCTCCTGGGTTCAAGCAATTCTTGTGCCTCAGCCTCCCAAGTAG
CTGGTATTACAGGTGTACACCATCACACCCAGCTAATTTTTGTATTTTTAGTAGAGACAGCGTTTCACTATGTTGGCCA
GGCTGGTCTCGAATTCTTGGCCTCAAGTGATCCTCCTGCCTTGGCCTCCAAAGTGCTGAGGTTACAGGTGTGAGCCACC
ATGCTCGGCCCCAAATGAATACAATTTTTATTTTATTTTATAACTATTGATCAAATCCATGCTCTCTTCTCTAACCTGC
TAATATTTCCCTAGTTCAAGCACTCACCAACTCTCCCCTGAATTATAGTACTAGTACCTGAAATAGTGTTTTTGAAACT
GTCAGTTGCATTTAGCATTTTATTTTAAAAATATGATACAGAATTGCGTAAAAAATAAGAGTATAAAACCACATCTATA
ATATCAAAGATAAATATGGTTTTATAAAATTATTGATACACCCACAGACATGCAAACACACACAGACATTTTGCCATGA
AAATGTATTTCTTACTATAATTTTTAAAATTAGAGAACTACTTTCTTAAATGGTCGATCTCTGTTGCACCTCTTCTTAG
CTCTGGCCTTCCATGATGCCAGCAAATTTATGTAGTTGAAAAATTAATCTGCAAATGTCACTCTTCTTAAAACCTTTTC
AAGCCTTCCCATCATCCATGATAAAATCAGATCTCTTTCGTGTGGTACCCAAAGCCCCTATCCAGATATGTATTGTACC
TCCTCTCCAGCCCAGCCCCTGGCTGACTCTTTCAGCAGCAAACTTTTTCCACCCACGTGCACCATGTTTCACAACTGTC
TTCATTTACTTGTACTCTTCTCACCATCTAAAACTCGCTTCTCTCTCATAATTGCCTGGTTCACTTTATCTCATTTTAG
AGGACACCTAAAATTCAAGCCCAGTCCCCTTCCTCAGGCCGAGTCAGGCTCTTCTCCCAAACCTACCTCTAGCATAACC
TAATGAAATTGCTCTAAAAATTATGGTCTATGCCTCTTTATTAAAAAAAAACAACAACAACAAAAAAAAAAACCCTGCC
CACCAGTATAGCAATTCTTTTGTTATAACCACACATAGTACTAGTGTGTGGTTCTGGGGCACTGTCATGCCAACTTACC
TGTGTTCAATAGACCTGAAGTAGGGAAGATCAGCTGACTCTTTTACATCTCTTCTCAGAACATCTTGAAATGATTCTTG
GGTGCAATATAAGAGCAAAACATGGAACAGTAGAAACCAGCATGGAAAACTTTTTCTCCTATTTGAGAAAGTGGGATGA
AAATGTGTCTCTTAATCCCTTTGGCAGAAGGGAGTAACTTGAAAGAAGTGGATGATGGATGATCTTCTCCACTCTGTCA
GCCCTCTGAGCAGAATGAGGAAAATGTGAGAAGCGATACCATTGCTATATTTGTTTCATTGACCATTATTTTAAATAAC
TTACATGGTCCTGAACAAGGACATGTTTTTGTGAAAAGGACAACATTTCTTTTGGTGTGTCCGAGTAGCATTTAAGAAA
AGCCTTATAGTGGTCAATGAAGGTTGGCCTTTCACCCGCTGCTACTGGAGAGTCTGTGAGAACACTATTTATTCAGCCT
CATGGAAACACTAGGGAGTCATGCCTGGGATCTGACAACTGTGCAGCACCATGCCAGGTGCACAGAGAGTTGTTGTGAT
GAATGTCGAGAGAGGTGGTGGGGGATTTTTGTTGTTTTTGCTCCTTCCATTTTCTTTCCCTCTGACTTGGGCTGTGGTT
TCATTCATTCTACCTCCCCACCCCTATGCAAGAATAGATCTCTGATCTCTTTCTCATACTTTATCTGCCCTAACTTCCA
CTTTCCTTTTCTTGAGAGGAGAAGAACAACTCCACAGTGCTTTCCTTTTATGTTTTGGGCTAATTTTGTTGTGTTGTTT
TATGGTCTTGAACTGAGAGCTGCCTCAGCACTCAACACCAGCCCCTGGACTGTGAGACTAATGAGAAAAGCAAAATGAC
TTCAAGTAAAAGGAAGTGGTTTGTGTTGTGGAGAGAAACTTGGAAAGAAACACCACCAAGAACACTAGGGGCTTTATTT
TCCCTAAAGCCTACAGTTGGGTTAACACATTTCAAAATAACCGGTCAATTTAGTTAATCCCATCAAACGACCTAGTCAA
TACAGTAAAGAGGTAGGGCAAATAAACAAACCGTTTTTTGGATGACCGGTTTAGCTTCATGTATCCTTCGTCTTACTCA
TTTCTAGGGAATAATTTCAACTCAAGGAAATGTGAACATCTGTTTTGCAAACTATTACAGGCTGGTTTAATACAAAAAT
ACCTTTAAAAAAGGTATGTTCATACTCAACATGTTTTTCCAGCTGTTATTAAAGCAGGTAGAAACAATATAGTAGGCAT
AGAAATCTTGATTATAATGTGGAAAAACTAAGGTTAAAATTATTAGCAGAAATACATTTCTTTTCCATCCTTCCACTGT
CTGAACATCTCTCTTTCCTACTTCCTCCATTTTATTATTTTCTTTGCTTTGTTTCTCTCTTTTAACCTCAATAATAACA
ATTCTGTGTGCCAAACACTGTGCTAAGACTGGGCATGCATGATCACATAAGGTAGGTAAAATTATTATTCCCATTTTAC
AGAAGAAGAAACTGAGGCTCAGAGAATTTAGGGATATGTCCCATGGTCATTATTCTGGAAAGCTGTGGAGCCAGGCTTC
AAAACTTGGCAGTTATATTTCAGATTCCACACCCTGCAGTCAACACTCTGCTGCCTCCCTCAAATTTTATCTCAGTTCA
TTTGTTTTCTCCGATCTTCTCCTTTTCACATGTTCTCTACTCTATTCTCTTGCCTTTTTCCTTTCCTTATATCTGCCTC
TTCTTTTTCCAGTCTCTTCCCTCACTCCTTCCCTTATTTGTCTTGTTTCCCATTCTTTGTCTAAATCTCCTCTTTTCTC
TCCCTCTTCACCCTATTCATTCCCAGCTCCCTAAAATTATATCATTCTTCCTTCATCATGCTCCCTCATTCCTCACTGC
AGCATCACCCAGTCCAACTCTGTCCCATCTGTGATTCCTCACTTCTGCTTTCGCACCATCTCTCTCCCTAAGGTAGAAG
TGGTGCCCAGCTTTAAACACAAGGCAAAGTGAGGGTATGTTCCACTAGGACAGCGTGTGTCACTCTGCTGCCATACACA
GGGAGTACCATCAGTGATTATAAAGAGGAATTTCATTCCTGCCAGAGAGCTCACAAATTAGGTTATTGTTGATGTTCAT
ATAGTTTTTAGTGACTGGAAAAAGATAATGCCTCCTTCTATGGTCACTACCAGGAAGTGAGCTCCATGCAGCAGACAGA
AACCAACCAGATAACTGTGAGATCCCAGCCAAGCACAATTTCTACATGTTAGTCAATTGCAAGAAACACTGAGATGTAA
TGTAGTACTTTGGACTCATATTACTCAGGTGACTATGTTTTCAAGCAGCCAGTACAGGACAGAAGAGATTCATTTCCTT
GAATCAAAGCTATTTGGTGACTTTTCCTGGAAACACTCTGAGGCTTACAGGAAGGGATTCCAGATTCCCAAGCTACTGG
CACAGAGTAAGCATCTTTTCTTTACATAGTAATTCACAAACGTCCCTCATCACCATATGACAATATCCTCACTGGATCA
GCTCGGTTACCAGAAATAACTAGATCAAAATAAATGTCATTCTCACATGGACACAGGTGGACTAGGGTTTAGAAGTTTT
GGGAACCATCACAGTTCTAGGCACCTGAAACTTCTTCTTTTGCTTGTAGTAAATATGGTGTCTTTCTCAGGACTCTGCC

Fig. 9.307

CTTTGTTTATTTATATATCTGGTCTGGTTTTTGTTTTCTAGAGATAGTTCTCTACTCTCCATAGTGTCTGCTTTCTCAT
TGCCTGAGTTTGTACATGGCTTGCCATAGCTTCTCTAGGCCCAATTTTAGGCCATCAGTAGATTTAAAAATTTTTTTT
CTCTTGACACCAATTACCTTAGTTGCAATTTCCCATTTATAATTGCAACTTGAGCCTACAAATTTACAAATACAATGAG
GTAACTTTCCACTGTGGTTAAATATTATAGATTATTGGCTGCTGGTAAACCCATGAATTGCCTGCCTTTGGATTAGATA
TTCAGACCAGGTCCATTTAACAATTCAGACATTTTTTTAAACAATACTTTTTTGAGAGTCTTCCATGTGCCAGGCCCTA
ATCAAAGCTCTTGAGATACATTGATGACCAAAAAGAAGCATTATCCCCATTCTTACTCCTTATAATCTAGGGTCCAGCG
ACASGGCGAGATATGCACTGTATTAATGAAATAATCTGTACTGAATGTAAAATTCCAAACTGAAGCATTTTATATGAAG
GAAACATTCTMTAAAGGAAAAGTGCGGAAGGCCCCCAGAACGTTCCAGTCTACACATGCTCCTGGAATTTTATGGGAAA
ATAAAAAGTCTGTCAGAATGGATCTTTTGAGAAGATTCCAGAAGTATGTTGGCCAATAAGAGAAAATGAGCAAGTGGAT
GCCAGAAGCCATTTCTTCCATTGTTGTGCTCAGTTTGCAGTGATACTACTGCAGAGCTTGAAAGGCAAGTACTGGCTTC
TCTTCCTCTTGTTCTTCCACCCAGAAAAACCATCCTTATCCTCATATTCCTCCTCCACCTTCACCACCACTACTACCTA
TTTTGAGGCTGCCACCACCACACTATAACATATTCCTCCCCGCTCTAAGGCTCTGAATTTGGACCTCCCACATGACAGG
ACTCTAAATAATGACTAATCCATTAAGTTTCTGCTCCATTTCCAAAATATTCATTCAAATTTGAAATGCCTGGGGCCTC
TTGTGTAGCCATGGCTGGGCTAATTTCTGCATTTGCATTTTAAACACCCTGAATCAGGATTACACCTGAAGACTTTCAA
ATAAGTGCTTAGATGGCACAATAAAGATATTCAGGTTAAAAAAAAAATCTAATGAGTCTGTTGTTCCTTTGCAAGGCCTA
GTGATAGGAACCTCTTCTTGGAAATATTTGTTAAGCCATTCTCACTTGTAGTCACTCTTGGTACCAAATCTGTTGACCG
AAAAAAAAAAAAAAAAAAAAAAAAACTCGAGGAGAGAGGGAGAAAGGCAAAGTTACTCTAATGTTTTAACTAACCCATAT
AACCACGGAGAACCAGCCCTAGGAACCAACACTAAAATCTTAAGGACTGTTTTTTCAGACTCTGAAAATTCTCCTAAAT
CTCCATTCCAGTATCATTCAAGCTCTTTACAACCGCTGTTTGTCCTTAGGCTGTAACTTGTGCCTGAAATCCCACTCTA
AGGTTCCCTTGTGGTATTTTTAATAGTGTTTGATGCTGCAGCCAGCTTCTCTGCGGTTTGGGAGTTAAATGGGATACAG
CAATGTGGTGTGCTGTAATGGCTCTTGGAGAAATGTTAGGGCAAATTAAATTCCAAATAGGATAGCACCTGAAAGAACC
TGGTCCTTTAGTGAAAGAGCGTAGGAAGGAAGGCTTAGAGAGTCTTACTGGCTCCTAAGTGATTAAGAAGAAACATCTA
ACCTGAGTTTGAAATTCATTTGGACTCAAATACAGAGTATTTACTTTAAGACACTGGTCCTTAACCACCTGGTTCTTC
CCTGTTTGCTTTTCTGCTTAGTTAAGCCCAAAGATGGGTGTTAGTTTAAGAGAAAATGGTACTAAAAGGGAGGAGGGGA
ATAATTAACACCTTTGCTTAAAGCACCAAATCCCATGAGCTGATGATTGCCTAGGTTAGGCAATGACTACTACCACTAC
TACCAAACAGGTCTGGCATCTCCTATTCCTATCCTGACACCCAGGCCCAAGCTGAGCACAAGCATTGCAGGATTCCGCA
GCCTAATGTCCGTCAGCTTTTCCTTTGAACAGTGGTTACATATCGTTAGTGTATTTGAGTCAAATGTGGGTTTAAGGTA
GTGGAAAGACTTTTTTCTGCTATTGAGAACAGAATCAATTTTTTAAAATGTGTATGTACACACACAGATACACACACAC
ACACACACACACACACACACACACACACCGCTATATATTTTATTTTGGAAAACAGTTTTATTTCCASTAGATCTTTATT
GAATAACCTATCATCTACGGAGTTCCTATTTAAAAGTTTTCATTGGTAATGGATTTATTCCAGACAGGACAGGTTATAT
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AATCACTTTATACCAAGAAATCACATTCTGGCAGGCCTAATATGGTATAGGAGATATTCGTAACTGGTTATCTTCATTG
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AATAATTTGAGGGTTTAGAAAATGTTTGAGGTTTTTTTTAAAAAAAATCTTCCAATTTAACTGAAAACTCTTGTATTTC
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AATGTGGCACTTCCATCATACCTTGCCTGTAGTACCACCCTAGAACTTTTTTTAATTGAAAATATTTTAAAAGATAATT
GATTCGTATGCTTCAAAATTCAAAACGTGCCCTAGAAAGGATCGATTATTAACAGCTTCTTGTGTATTATGTAAACAAA
TCTTATGCATATACAAGCAAAATACATATTGGCTAGCACTCTTAAAAACATAGGAAGGGTTGAATCTGACCAAGTTAAT
ATTTCAAAGGTGTCTATCAGAAAGGAAAAGGAAAGCTTCCTACAGTTATGTGTATATTTTTTTTAGTTTAAAAAGAAT

Fig. 9.308

AAGAACAAGATATTGGGTGTGTATGTATATATGTATCTATTTATTTATTGGAGACGGAATCTTGCTCTGTCACCCAGGC
TGGAGTGCAGTGGCAGGATCTCAGCTCACTGCAACCTCCACCTCCCAGGTTCAAGCGATTCTCCTGCCTTAGCCTCCCG
AGTAGCTGGGACTACAGGCGTATGTCATCACGCCCAGCTAATTTTTGTATTTTTAGTAGGGACAGGGTTTCACCATGTT
GGCCAGGCTGGTTTCAAACTCCTGAACTCGGGTGATCCACCCACCTCAGCCTCACAAAGTGCTGGGATTACAGGCATGA
GCCACTGCGCCCAGCCAGATTTTGGGTTTTTAAACCTATTGAACTTATCTTTGGATACATATTTTAAGTTTTCCTTAAC
TGTAAATGTGTTTATGTTCACTAGAAACACCACATGATTTCGCAGACATGGAATTATGTAGGTGAAATCAGCGGCTTTC
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CCGGAATAGTGTTTTTCTTGCTTACTTCAGTCGATTTCTTATATCTTTAGGAAAGATCTGCACATTCATTCTAGGTGAA
TGTAAAATTGCATTTTAAATCCATTCATTGGGAATCTCACTTCTTAAAAATCATGCGGAAAGATAGATGTACATTTTTA
GTAACCGAGCTGTTCAGTAAATTTCTTAAGATTATTTTCTCATAACCTCTGTACATCAAAAGTGAAAAGAACCTGTCCC
CTTCTCTCTGTATGCAAAATTCCAGAGAAGCACCAAGAACCAGAAGAAGATGAAAGATTCGGAAGAGCACACATTTTCC
AGCCTGCCAGCCTGGGTTTAATTTCACTTTCCCAAATATTTACTTGGTAAATTCAGAAAAATCACTGGACCTCCAGGAA
CCTCATTTCCATTACTGTCATGTGGGATAGTGATAACACTATGGATCATTACAAATATTAAATTAGACTGTATGGAGAA
TGCTCCAAAAGCTAAATTATTGAGTGCTCACAAAAAGCATTCAACAAATACACCTTTCCAGTTGAAAATGATCATTCCA
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ATTCGAGTTATAACCCTGGGTCAAGCAACTTAACTAGGCTGATATTTTGGCTTGATGTGATTTATATGTAACCTTTTAA
GCAATGTATATTAAATCCGTACTTTTTACTCATCTACTTGATTGCAAGCTCCTGCAAGATAAACTTTGTTGAACTCAAA
TGTTGTAAACTTCATGGGGCTTAGATATAAACTACAGACTTCATCAGTGTTTAACAAATACTTGCTTAAGAAACACAAA
GTCCTGTTATATCAGCCAATTAACTATGAAGCTAATTTTAATAACTGAAATATCATAGAGGTTAATATTCAAAACACCA
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ATTTTGTCATCTCTGAACATACCATTTACAGCTTTTTAGTTATTCTGGAAAAATCACTTTGTATGAAATAATAGGCTAT
GATGGCTAGAAAGGATCTCACTGATCATCAGTGCAAGGATTGATTTTAGAAACAAGGAAAGTGAAACCAGAGACAGCCA
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CTTTGTGCACAACTGACTGCCTTAGTTAAGGACAGATAATTCTTTTCTCTTTAACAATAGAAAATTAGACTAATTAAAG
TCATAAAAGATGTTGCTCCTTTATAAGCCATAGAGAAACCCCCGATGGTTTCTTTATTTGGATCTGTGATCTTTAAAGC
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ACCACGCCTGGCTAATTTGTTGTATTTTTAGTAGAGATGGGGTTTCACTCGATCTCCTAACCTCATGATCCGCCCGCCT
GGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACTGTGACCAGCCCATTTCATTCTTTATAACCATTATGAATTC
CCACCTAGTTTGAGAACCACTACTTTTGTGTGGTTTCCACCCTTTGTGTGATTTCAAAAAGGCTCGCCTTTAGGCAAAA
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CAAAGCCTAAGAGGGCTAGTGGAATGCTAGAATGAACTCATTTACCTTCCTTTGATATTTAGGGGCTCTATTGCCTGCT
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GGGAATAATTAGAAAACTGTGCAAGATCAGAAGGGAGCCCCTGAAGCTATAACTGCAAGAACCTCCAGACCCTATTGCC
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TAGGCTGCCTGCCGATGTCCACAACATCGTCCCTTTCACATGCCTAATACATTAGCGTGGGCCACTCATTTAAAATTTA
AAAAATTTCATTTAGCATTTAAAAATTCATTTGACAGAAGAGATGTTTCAAATAAATAGTCTTCAAAAAAAGCCCGGTC
TATAAGTCTCTGTAACACAGCCCATCTGCTTTAGGTGAAGTGAGGCAGTAGGCCTGGAGCCTCACCTGGTTGGCTCTTA
ACCACATTTACTTTCCAGGAGAAGCCTTTCACCAACTTCCTCAGAACCTCCAAAACACCAAGGAACAAGATCCTGAAAT
TGTCCATAGTCTTAACTTTGTTAATAACAGACTGCATGCCCCTGGAAAAACTATTTCACTTCTCTTGGCCTCATCAACA

Fig. 9.309

AAACAAATGTGGCCTAAAATACTTTGTAAGATGGTTTCAGTTGTAAACAGCCTGAAAACTCTTAGTACAACTAATTTGG
GCAAGTAGGTTTGGCTACAGATAAAGAACAGAAAGACTTAGACAGTGGTATACATTACTCTGAAATATTTTTATTATGT
AAGTACAAATAAATGGATGTCTAATTGTTACTTTTCAGGTAGCAACATTTGTAGGAAATGCATTTTGTTAGGAATTTTA
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CACATAAGTCAAATATCCATTTATAGTTTTTAACTCTTCTCTTTGGCCCCTAAAAATAGAAGATCATTCCTGATTTTAA
AAGTAGCACTTGTATGCATATATATAATTTTTATCTTTAAAGGAATACGCTGATGATTCCTGACTCTAGCCAGTCCTTT
GCAACCTTCAAAGGATTGTCTCCTTGGCCCTAAGATGTAACATTGTTAACCTTTTATGACAGAATCACGTCAAGGAATA
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ACAATCACTTGTATCTACTTGAATACAGATGTCTTGTTACTATTTCTGGAAAATATTCAGTAACAAATTTTTCTCTGAA
ATATTGTTATTAAATTTTCTTAAAAATTGTTTCTAACCTTCTTTACTAGAGCTCACTATAAGGTAGTCTTTAGTTTAAG
AACTTCAACACTCTCTGATTTTGGTTTACCATTTTCATTTGTGCAAAATGAATGTGTACATAAGAATCTGTATTTCCAA
CCCAAAGAGGCATTATAATGACCGTTAAATTTTCCATCCAAGAAATAAACTAACTCCACCATCCCTGAGTGTATACCCT
GCCCTTCTCACTCTTGTGTTCTTTAATTAGACCCAATGTGCAGGACATGACTTGACTGAAATTTATAGCCACATTGAGA
CATGCAGCTAAAGAAAGCTCTTAGACCAGGCATCATCTCAAACTTTTAAAGCAATAGGATCATTTGACAGAAGTGTGAC
TCGCTATAGTAATTACACAGGTGCAAGTTATAACTACTTAATCTGCTCCCAGCATCTCTGTTGCCCTTGAGAAGTATGA
TGTCCTCTAGCCAACATGGCTGTTCATATGGGACTGAATCTGCACATATTTGAATTGAGTTTTTCAAGTTTAGAAATGT
GATACTATTTTACCCTTATGTGCCTTCCACAATCCTACTCCTCTCTTAGGTGGATCAGAGTTTCTGGAATCCATCATCT
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CAGTTTCTCAGTTCCTCCTCCTCCACACGACAGTTTTTTAGTTTTTTTAGTTTTTTAGTTTTTTTCTAAAATGGAGTTA
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TGCACTCCAGCCTAGGCGACAGTGAGACCCTGTCTCAAAATAAAATCCAATTATGATCATACCTCTCTCCTGTTGATGT
CCATCAGAGTCTGCAATGCCTTCAGGGTAAAGTTTAAACTTCCTTCTAGAAACAATGTTCTGCGGTAAAATGACCAGGG
TCTTTGGTATTAGATACACCTGGCCTCAAAAAATGGGTCAGCCCAGGTATAACCTTCCCCATCTTCTGTTTCCTCATCT
GCATAATGGAGTAACAAACATTGTCAGGAAGTTACTGGAGTAATTGTGTGAGATACCAAACATAAAAAGCCTGGCACAA
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CTCCCACACCTCTGTAACTTTTGCGTATATTGTTCAGTCTCCCTGTAAGTCTTCCCTACCTTCACCTTTTATAGAAACT
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CCTAGCAAATATTGGTTAAATGACTGAATGGATGATACAGGGGGCAAAATAAATATGGTTTTAGAAAAGTGGCATGGCT
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CTGAGCTCGTGCCACTGCACTCCAGCCTGGGCAACACAGCGAGATTCCGTCTAAAAAAAACAAACCAAAAAAAGAAAAT
GTAATCAAGCTAAAATGGCTTTGGCTTTCCTTCAGTAAATGGTTACTGTGGGAATATATGTGAAATGAATATCAATACT
ATGATGAGAAACACATGCACTAAACAGCTATACTTCTGATGCCATTCTCAAATCTGAAACTTTGCCCAATTTCAGGGAC
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TTTCTGCCATTAGCTATTCCCAGCAGAGTATTCTGAGTCACATAGAAAGTGTCAGAAGCATATAAATTACTGATACATT
TTTTAATCCCATATTCCCTCAGGGTTGGCGTTTTTCTCTCTTGAAAGTTTCCCCCTTAAGGCTGGGCGTGGTGGCTTAC
GCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCAGGCAGATCAAGAAGTCAGGAGATCCAGACCATCCTGGTTAATACG
GTGAAACCCTGTCTCTACTAAAAATACAAAAAATTAGCCACGCGTGGTGGCGGGCGCCTGTAGTCCCAGCTACTAGGGA
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AAATTAATTTCATAGATACCATTTCCATTTTTCTAATGAATAATACTGTATCCTTTCCTATCTATACCATGAAGTTTTT
CTTTGCCTTGAAAACCCATTTAGATTTATGATTTCTAGCCCCCAAAATAACTTTTGTTCCTATATCCAATTCCTTCCCT
CACAGTTCTTTCACAATAGCTTCTTTTCTCCTGTAAAACCCTACATAAACTCCAAAAACATTTCTAGTTTTGGAAATCC
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TGTGGCTGTGGGAAAGTGAGGAGGACTCTTTGGCATCTGGGCAGAGGTACAGGGAAGCCAGGATGGGGGCAGAAAGAAA
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TTCCAGTTTGCCTGGCACTGAGGGATTTCCTGGGATGTGGGGCATTCAGTGCTAAAACTGGGGAAGTCTTGGACAAATT
AGGACAAGTTGGTCACCCTACCTTTCCCTTGCTGCTGCTGTCCTTTTAAAGTCCTCATTCCTTTGAAAATTGCAGTGAT
CTTCAGTTCTTCGTGATTTTAACTGTATACAAATATTCAAAGAGCTTGGACCAGCACATTTCTCAGAGAGAGCTCTACT
TACAGTAAATGTTATGTGACAGAGCAGGATAGCAAATAGATGTTACCTGGGGCAACTCTAATTGCTTGGTCATGACTGT
CGGGAGTAAAGTGTTAATAGTTTCTTGCATATCCTCCAAGAGAGTATTACAAATACTATTCTGCACCAAGCTCTTTGTA
ATTTAATAGTGTATCTTGGGGCCCTTTTGTATGGACTTATACAGATCATGATCTAGAGATAATGATCATTCTTATTTGA

Fig. 9.310

CACATAGTATTGCATTATGTTATGTCTAAAAACCCATTTAACTCTATTGATAGTCTTGTGGGTCATTTCCAGTTTTTAC
TACAATTAATACAAATAACACTGCAGGCATCCTTGTGCCTGAACATCTTTGTGAGTTTACCCATTGAATAAAGTCTTAG
CTGTGAAACTGAATTTAAAATTTTCATAAATATTGCCAAGCTGTCTTCTAAAAAGAATATATTAAGTTACAATCCCACC
ATCATCACAAGAAATGCTTGTATTTCTATACACACTGACCCTGAGATTCACAAAAAACATATTTTCCCCATCTAATTTA
ATTGCAAAGAAAATTAGTCACCTTTCATACATTTATGGGCCAGTTCCCTCCTACCTCCAAAGACTCATTGAATCAATTA
TCTTGAGGAGTTTATTTTTTATGGATATGTTAATGTTTTGAGTATATTAAGAAAATGAACTCTCCTCATTTGTGTAAAC
TTTTCAAAAAATTTTAATTTGTTTAGGGTTTTTTTTTTTTATCATTTAGTCTTTTAAAATATTTGAGTAGTCAAATTCA
TCCTTTCAGATGGTTTCTGGACACCCTGTATCTTTTATGCTTGTTTTTCCTGGCATTCGGTGCAGTACCTATCACAAAA
TAGATTCTCAATAAATGTTTTTTAAATAAATGGACAACGAATGCATGAATAAGTGAAGGATATAATTTATTCTTTTCAT
TCCTCCTCATGCTATGTAGAGATTTGCAAAATGAATGCCAAAACATATCTTTGAACAGAATTTCATGGCCCAGTATCTT
CAGGCAGTGGTTTTTCTGTTTTGTTCAAAATGATGTCCCTATCATCTGCATAGTGCTGGCGTATGGGAGATATACGTAT
TGAATGAATACATAAATATAGAGAATAATGAGATAAATAGAACGTGGATTATTTGGAGTTCATCCTCCTGAGCTAATGA
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GAGGTGCAACCCCTTCAATGTGTCCGTTTCCTGGGTCATTTGGGGTCTTAGGAAAATCTTCTTGTTGGTGCGCACTGAA
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AGAACCCTGAATAACAACCTAGAGCTCATACATTTGGAGCCATGAGGAAAAGTATTCCATGTAAGTTGAAGGAAGATAG
CAGTCAGGAGCATTGGTGTTGAAGACCACCCTCACTATGAGAAAGGGTCATATATATAATGTGGAATGAATCAGAGCTA
CCACTGTGGGTCCCCTGTTGGAAAAACTGCAATTTTGGATAATTATGTGCAAGCACTAGGAGAAATGCCAGATGTTAGA
ATCCATGTTTAATGTGAAAATTGCATTTTGTTGTTTGCAGAACCTCAATATATAGCTTTCTCTATAAAATGTGGGCATA
TTTCTGAAGGAAAGAAAAATGCCAGGGTTTCGTTTTAACATCCTGTTACGTTTTAGTTAAATTCAAAGGAACATGACTT
TTCAAAGAGAAAACTGTCTCTCTCTCATAAAATAGCATTAAGTGGTTCCAAACATATCTTAGGTTATAATTGAAATTGG
ACTCTGTGGAACAAAATTAATGATGGTTTGTTCTCAAAGGCCCATTGTCCCGTTGATTTTATCAGTTATTCTTTGTTAA
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CAACAACAACAACAACAACAACAACAACAACAAAACTAGTTGCTAAGTTACAAGGGACATTGCCTGTGAGGCTGTGTCGTAA
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TTTATTAAATTAAGCTTTTGTAATGTCCTGATGTAGTGCACTGTATTTTAATGCTGTGTCTTCTGTTGCTTGAGTTCCT
AATTTGTACCAGGTGTTGTGCCAAATGCTTCAAATAAATTACCTTGTGAAATCCTCACGACTCTATGGACTCCAATTTA
CAAATGAGAAAACTAAGACTTAACTTGCTTATTCTTCACCAAGGCTAGGAAGTGGCAGAGTTAAAATTTGAATCCAGGT
CTAAAGCCATTGGTCTTCTATGCCATAGAATCGGCATCCATTTTGCTACTCTTACTAGAAAATCATGAATCCTAGCTAT
GAATTGTAGTGAGGAGGAAAGTTTTTTCTGTTTCATGTTTATGAAAAAATCTCTACCTTTTTCATTTTTTTGGTTGGTT
TTCAATTGGCCAATGGTTGGAAACAGGCAATTTTCAGAGATTTTGTGTAAGAGTGTGTGTATATATATATTGTATATTT
ACAGACAGAAAAAAATTGAGATTAATTTTTCAATTCTCTAAGTCATAAGAGAATGGAAAAACAGAAATGGACAAGCAGA
ATTTTTTATCCCAATGTATTCTTTGACATACACTGGTCATAATGCTAATGTTAGCAAAAGAAATAAAGAAATCCCTGGT
GCAATGGGATGATTGACCTTCCTTTAGCAGAACAGTGTTGACTTGTTACCGTTGTCAAATCAGACTGAACACATTCAAC
AACATGATCATTTCTACTTGTGGGTTTGGACTGACAAGGACATTTCTAGTATATCTTGTTGACATCAGGTTAATAAGCT
CTAAGCAAAGCTGAAAATGAATGCTACTTCCCACAATCAAGTGGAAATGTTAATATTATCAACATGTCTTAAAGGCCAT
GAAGTCCTATGCCTGTATATGTAACAGGAATAGCAAACAGGAACTTTTCTTAAAGGGAAGATTAAACTAGTGTTATTTT
TATGTATTCGTTAATTGCATGCTCCCCATTTTTAAAACTGTACCTGAAAATATACTGTAATAAAAAATTAAATTTGAAA
TATTATACCATTGAATAAGGTCCTCTGGATAGTTTTGAGATTTAATATTCTTTATTTCAATTTACATGTATACTGAATC
ACGTAAAAGTTATTTAGGTCAGTACTTCCCCACATTTGTTCCTTCATGACATACGCTGATAACTATATTTCTACGAAAA
CTGCAGTAAATAAAGGATGTGGCTTGTGTTCAGTCTCCCACCCACTAGCGACAAGAGCCAAGGGAAATCAATAGCTTGG
CTCACCTGTCATCTCCACTCTTTGGCACACCATTGAGAAGTCTAATATGTGCAAAGAAAAGTTAATTTTACTTTCAAGG
GTTATACCTTTGCTTATTCCAAAGAACGGTGGGGGAGTGTACCAGGGCCATTATTATAATGTATATTATTAAACTTTTT
ACATTTTAACTGATTTCTCTTATAGTAAAATTAATTATATATTAGCTTTGGGGTATACAAAATTGCACTTTGATAATAA
TATTTAGGAATTGGCAACTTTGTGGGCAAAGTTGTGGGAACTATCAGAAAAGTAAAAAATAAAGGTGGGACCCGAAAGA
AGGAAGGATTGTAGGTTGGAGCCATACGCGACTAGAAACTAAGACATGTATCCTTAAAAACCCTCAAATCTGTGTTCTG
ATGGGAAAACCCTGCTAAGTCAATGGTTCCCAGACTTTGGAATTTCAAAACAAAAAACTGTGAGGCCCAACATACAATT
ACCAACTCTTCATTTTTGCCAAACAAAACTATTTCAACAGAACACACTAACATATACTGGAACCATGATTTCATATTA

Fig. 9.311

TGACATTTATTTTCCACATTCTATATACTTTTAATATGCAAAACAAGGACAAAAAGGGCAGTCATCTCCCATGGGGGGC
TTAGAAATCTCTCATTAATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTTTAAATTGGCC
TTATTATTTCTTTAAATTTAACCAAGGGCCAGTAAAACTCCCTTTTGGAATACCACACGCCCGTGCTGTTCAGGAATGA
TTATGATAAAGTCATTCATGAGGACATAGAGTTATTTCATATGCTCTCAAAAATGACTTGCAGTGCGAAACACAGCTAC
TATTGGACAAGACAACAACCCAACTTTATATAACAATTTTTTAATTCACTAGTACTTGTGTATCAGTCAATAAAGTACC
TGGTACTTGTGTACTAGGCACTGGGATGGAGTTGGGGATACGAAAGTGAAAAATATAGTCACAATTTCTACCTTATACT
CTAGTAGGGGAAAGAAAAACAAAATGTATGATTGAACTGCCTTAAGCACCATGAAGGCAACATACAAATTGCTGTGAGA
GCATATAACCAACTCAGAAATCAGCCTTAAACTGAGACCTAAAAAGGACTCCCCCTGTGCCTTTTGTATATTTAAGGCA
TCTTTTTTATATTCTAGAAATACAATATCATTGAGCAGATAGATTCCAAAGGGCCATCTTCTAGCTGGATGAAATAGAA
AAGGGCACCCYTTCCTCAGGCTAACAGCCCTGCCTGCTGAGGGCATAGTTAGGTGAATGGATCATCACTAATGAATGGA
TGGTTTTAAAGAAGGGAATAACATGACCAAATTTGCATTTAACTTTACTCAATAGTCTGGAGTATTTAAATATGATTAA
ACCTTTTCTTTCCATTCACTTGAATGAGGCAGAAGGGCTATTCAGGAATTTAAAGTTGACTAAGGTATTGATTGGGTAC
AAAATTTTTACTAGGTAGGTAAGGGCAGGATGATTCCATTAGAAACAAGAACTTTTTCTCCAGTGCTCTGGGAAGAATT
GATTGGTTCAGGGCTAAATCACCAAGATGAATACCTTCTTTTGATTCACACACCCTTTTGACATCTGGGTTTCCCTGAA
TCATATGCAATCTAGGACTTACGCAGACCACTCCAGTTTCACTTACGAAATTTGGGTTAGCCAACTTAAACAGTCATGG
CTGTAATTTGCTTCTGAGTTAAAATGCTATTATTATTTTATGTTATTTATGGATTCCTGCAAAGGAGAAAGCATTTTTA
TTTTGATAAATTTTGTTATTAATGAAATTAACTCAATTTTGTAGTAACATAGTATACAGTGAAAATGTGCTTTACGAGA
TGCCGTGGGCTTGTCTCTCAAATGGACAATGAGGCTTTCCGAAACCTTTGTGCCTTTAAGTTTAAGGAATTGATTTGGC
GTCTTATCTCAGTGTACACAAAGCTTAGTTATCACCTAGGAAATATTGGATGTTTGTCTCAGGGAGAAGAGACAATTTT
TGAGACCACAATTAGGTTTTGTAGCTATTTGACATCCAATTATAATCAGATACTCAGTGAAACATGCATTCATAATGCA
GGCCAATGATCATATATTTGGCTTAGCTTTTCACTAGAAAAATTCTTTAAAGAAATATTGTCCTTCCAATTTTAGTGGT
ACTGAGGAACAGCTCTGGTTATAAGGGGGGAAATACTATATGTCCTTTGTTCAATCTTACTAATCTTTATTAATTTTAT
GATTTTCCCCATTTATTTTTAAAAATCATTAATAAAATTATCCTTGATTGAGTTTCTCCTATGTGCTAGGCATTGTGA
TAGGACTTTAGTAAACATCATCTCTAACCCTTTCAATAACCCTGCAAGGTAGGGTCATATTTTATAGATAAGGAAACTG
AGGCTCAGAGAAGTTATGTCTTGAAATTATATAGTAGCAAGTGGTTAAGCCAGGTTTCCAACACAGGTTTGTCTGACTC
TAAAACCAGCATCTGCCCCCATCTCCTCACCATTCGCGACCAGAATGTGATGCACGTCTACCAAAAAGAGAGTAGCAAA
AGGTGATTTATAGAAGCAGTTACAGTCCTCTGAAGAGAAGGCAAAACTATTGGGGATAGGGAAAAAGTAACTATAAAGA
TCATATTTATATAATCGAATATTAACTTAATGGCTTGAATTAGGTGGCAAATAAAATATATTAGCAAGCAATGTTACAA
ACCATGGTGAGAGCTATGTAGTAGATGAAGCAGAATGATGGCTGGGCTCAGGGAGCTCATACATTTGGAACCCAGATAA
ATCTTTGCTCCTTCTTCCCAGAGCCCATCATCACTTTTTAAAAACACGTCTTTGCTGGGCTCAGTGGCTTACATCTGTA
ATCTCAGCACTTTGGGAGGCAAGGCAGGAGGATTACTTGAGCCCAGGAGTTTGAGACCAGCCTGGGCWACATAGGGAGA
TGCTGTCTCTACAAAAAATAACAAAGAACAAAACCATCTGAATTTCATGCATTCCAACATATATTATTTTGTTCCATTC
TACTTAATAACCTTTACACTAGTTGTGAAACTCACTGAAAACAAAGGAGAAACTCATTATAATTCATCTAAACATTCCT
GAAATATCACTTTAATCAAAAAATTAAGAAATATTGCTCAGATTTAAAAGAAAAATGGAAACTCCCTTGGCAAGTGGGT
TTGAGGTTTGGTCATTAGGTTTTGAATAATCAGGAGCTATGTGTTGTAGTAGGAAAAGCATACCATTTAGAGAGAGACA
GCTTTAGTTTGTCAGTCCTGCCTCTTAATAGGTGGATGACCTTGAGTAAAGCATGACGCAGCCTTTGGGCATCAGTTTC
CTCACTTAAAGGTAGAAGGGTTGAACCAGGTGTAAGCTGCTGTTCTTCCATGTTATGATTCTAAATAGTTCTAGATGGA
ATTATGTTGCACATTTCATATGTTGTTAAACAGCTTCTCTCTGGAACAGTTGCTCCTAATCTCCTAATAAGCTTACTAT
GGGTCACTCAGCAATCTTCAAGAGAAACAAACATTATTTGGTTGGTGGATACCAAGACAATTCTGATGTGTTTGTGTCA
AAGATTGGTCAGATGAAATCTAACTAGACATGTATCATTCCATCATCAAGCGAAATGACCTTGACTCTAAACATCTTAA
TTTGAACTGTAGACATTTCCCAAATGCTTTAGGGTAGATTTGGACCATAATACACTCCACTGTAAATGGAGAAAGTTCA
TCATCCCCATAATAATTGCCCCCAAACTGCTAGGTAGGAATGCATACTGGGTTTAGTATGTATTAACTCCCTTGTGAAT
TCAGCTTTTGAGAGCAGACCTCTTAACAAGTCATGAGTATTTAGAGTGAAATATTTAATTCTTAGTGATACTATTTTCC
TATTCTGCTATTATTATTCAGCTATGATTATTTTCCTTCTCCTCCCAACCTCCTATTTCTTTTTCTTTATTAAAAAAAG
GAGAGGAGGTGCATGCTGCCATCTGGGGTGAATATGGGCTTCACGTGGGGACCTGGGCGCTGGTTCTGATCCAGAGAGT
GAGCTAGGAGCACTTACACAAGAGGGTCTTAGCCACTGTGTCGGGGGAATAGCCTTATATCAAAGACTGAAGCCTTTTA
GTAAAACCTGAAGAATAATCAGAAGCAGCATTGACTAGTCTCTAACCTTGGTTGAGGGACACACACACACACACACACA
CACACACACACACACACGGCTCTGAAAGCTCAGACACGGAGGACACGCTGTGATCCACTTAGCCCTCTCTTCTCCTTCA
GGGGGTCCCTTGCAGGACAGAACGCTAAGGAACAAAGTCTTAACTGGCAAGCTGCCGGCAGAAGGAGACTGTCTGGTGG
ATTGCAGCGCTGATTAGGAACGGGGAGTCCTTTGCGTTTCAGAATCCGGTCCACATTTTGCTGAGAGCCCAGGCACTGT
GAATAAGAGGAGCCTCTGAGGACTGGTTTCTGATGTCGCACTAGGCATGATAAGAATGCCATTGACGTCAGCAGAGTCA
TCATCAGGGAGAATGGCACCCCAGCTCTTGAAACCACACCAAGCAATTGCAGTGCTTTTGAAAATTAAAAGCCGGTGCT
GGAGTGTGGGGGGTGAGGTGGGGGGTGGGGGGGTGGGGAGGGAAAGAAGCAAAGAGGGAAGTCGTGGCTCCAGCTGAAC
TCTTCTTTCTTCTATGCGTTTCCTGTATTTTAAAAAGGCAGGCTCACGGCCCTCCTGTGCACACGCCCGCTCACTCACA
CACACTGCTGCCTGGGCTCATTAACCTAAATTGGGGGAGGTGGGGGAAGAAGAAAGAGAGAAAGAAGGAAAAAAATTAA
TTCTGTTAACACTTCTGCATGCACATAAAACAAACTGTGCCACCCAGGTGCTGGACAGAGGCCCTGAGCCACATAAGCC
TCTGAGAATCAAATTGCTGAGGTAAAACTGATATGCTTTAAATGTGTGTTGATGAAGAGATTACAAGGGAGGAATTAAA
CACTTCAAAGGAGCTACTACAAAGCAACAATCACTCTTCCCCCATCCCTCACACACGCACATTACTGTGGACGCTTGCA
TGTTTGTGTGTCTGCCTGAGAAAATGGCAAAGTTGGTTTAGGAAGGGAACACTGCAGGCATGTTGTGATTTCAGCTTTC
ACAGGCAGCTCCAAGAACATCACCTCCAGCTATAATTCAACGGTTACCTGGACTGGAAAATGTCTTGGAGGTTACGAAG
TCTTTGAATTCTTTAGTGTAAATTGTCTCCGCTTTGAAATTCCACAATTGATCGAATCCTTTCATTCTCTTTCCCACTC

Fig. 9.312

CTAATTGTTCCACTCTAACTCTCCACCCACCGCCAGGAATATGAAAACAACATAGAGTAGAACTGATGATATCAGCTGT
ATAACACGCTTTATTTTACGGCATTAATGGGCAGCTTTCCAAGTCCATAAAAATCTTTTGCTGATCTGATTTTAATATC
CATATTCTTCAGTTATACTAGAAAGAATGATTTCCGAGATGTGGAAATGTTAGCCGGGAAACAAAAGGACATAGGCACA
TAAAGCAAAATCTGGCAGGAAATGTGGGTTTAATAAATTGAATTATGTGAAACTCCTATTTCAAATGGACTGATACTAG
AGGAGCAGCCCTCGAGAGATATGCACAGTAATGATTCTTCGTTTTCAAAGACCTGTTTCTTTTTGAAAAGGAAGAAGCC
CTGAACAGCATTCCTTTCAAATACACAAAGGTAGCTAAAGTACAACCTTCTCCTCTTTCCTATTTGTTCTTTAAAAAAT
TGTAAAAAATTATATTAAGTGTGCTTCTTGTGATAGAGTCAATAAAGGGAGAAGGAGTTTAGCAAAGCACATTTACTATA
TACTCTTAACCCGTCTTGCTTACTGTAATAATCGAAAGAAAGATGGCTAATTGTCTTGCAGGAATTTGGGTTATCCTCT
GAAAGGATACAAGTAAATTTGTAACTTGGGTCGTATTGGCTATTTTTTGTTCTCTTTTGCTTTCATTTTTGTTTTGTCT
GAGGTTTATAAATGGAACCCTTCTTTCCTTTCTTCCTTTTTTCCTTCCTTCCTTCTTCCCTTCCTTTTTTCCTTTCTTC
CTTGCTTTCTCTCTCTCTCTCTCTCTCTCTCTTTTTTTTTTTTTTACAATTGTACTTAAAAGAATAAAGGATTCTGAAAATC
AGTTCCAGGATCCAATAAGGGCCTAGATTGTATATCACAGGATCAGAGCCCCTTGCTCTCAAATTTATGATTGTGAGGA
TGTATTATTGTATTTGGGGGATCAATAAGCAGAGCCAGAGCCTTCACACAAGGCTCCTTGTGCCCCCTCCCCCGCTCCA
TCCCATGAGGTTAAAAAGCACTGACTTTGACTTTAACACTGTGAACAAAATACAGAACAACTGTTTCAATTCCCTTCAC
TATTTCTGCTATGTGCCTAGATTAGATGTTTTCTGACCTGTCTCCCTAAGTTGTTCCTGTCACTTGTGTCTGTCATTCG
CTCCCCCATCGCATCCTGCCCAACCCTCCCTGTCTATGATTCGAATTGCTCTCTGTCCAGATCATTTCCTGCAGTGAAA
AACGAAGAAAGACTTTCTCCCTTCTTCCCACCTACACATTCCTTTTGTCCCCCAAGATATCCCTTCCTCTTGCCTGGAA
TCTTCCCAGGCCTTAATTGATTGATTTAGGCCCCCTTTGCACCAGGCACCCTAGCGGAAGCCCAGAAAGCCCCAAGAGT
CTGGATGTGTTTTGGAGAGCAGGCTCAGGTTCACTGCACACTAATTTGCAGCAGGAAGTGCTAGGAAGCCCGATGAGGG
ATGGGAATTAGCAAATAAGGTTGGCAGTCAATTGACAGAGGAAGCTTAAGGAAGAGGATCATTTTGAAAAGGAAAAATA
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GGTCTGGCTGTACTTCATAGGGAAGAAGCAAGGGTAAGTGCAGTAAATTTGATTATGGACACCAGTCTAACTCTAGCTT
AATGAGCCATGGAAACAAAATAGCTCAATCTCTTCTAACTGCTGTAATGCAACACTAGGAGCATTGAGAGCACTGTGGT
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AAGAGATCTTAAATGTATCCAAAACCTAGAACAAACAAACATTAACATTTGCCATAATTACTGTGGGTGTTTTTAATAA
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AACAACCTCTGCCATAAATTTAGGAAATAGTCAACCTGTTCACATTTTCATCTTTTTACTATATATGTTCTTATTCACA
AACGAATATGTTGTAGTTATAAAAAGTCATCAGTATCTTTTAGCTTATTTTTTTAAATGCAACATTATGTTTGTTGGAT
CATTTTACTCTTGTCCCAGTGCACCCTGTAATTCCCATGAATTGACAGGTAGCGATAGATCAGCAGTAGTAAAGTAACT
GATATGGGTAGGTTAATAGAATGACCCTTTTAAGAAGGGATCTCAAAGAGGGAGGCTAGGTAAGCTACAAAATTATCAG
GGCGAAATGCAGTGAGGTAGAAGTGAAAGCAGCTTAGAGTCAGCCTGGGCTAAGATAAATGAGGAGTGGAGCTGCAGCT
GGAGGAGCAAGAGAATATGGTCTACTCGAGTATAAATCAAGCTTGCTGGTGAGCAGTTTAGGACTAGCTCCTGGTTTTA
CAGCAAGACTTTTTATGTGATCTTGACCAAACCACTGCACTTGATTGCTCCTTTCTACTCCTTGGTCCTCACGTGTCAA
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TTGTAGAAATATTAGGAAGTGGTATAAAGCCAAGACCATGTTTACTAAACAGTGCTGCTCTTTTTTTTACATCATACAG
ATGAGAAAGCTGGTGCTCAGGGAATTTAAGCAACTTGCCCAGAGTCACGTAGCTTAGAAGTGTTAGAGCCAAGATKTGG
ACCCCAGTCTTTCTCACTTTCACAGACTTGCTTTTAACCACTGTGTTATGCTATGCTGCCTCAGTATAAGCTCCTTTCA
AACAAACCACTTCCAGTCTCTGACATGCAAGCCCAGAAGTTTTCAGATTTACAATGGCATACTTTTTTTCTATCTGCTA
AGTGTTAGATGTCACGGTGTCTGCAATGGAGTAGAGCTTTAGAAATGAGGATAAAACATTTGGTTTGATGTTAGTATTA
AGAACTCCAATATCCAAGGCAGGAAACTTGGTAATTAATATTTTAAATGGACTGGAGGGGTCACAGGTATTAAAATCAA
TATTTTGATGGCAAGATAACAATGTAGGAACAAATAATTGGAGATGTTTAGCAAAATTATGAATTAAGTAGATGTATAA
ACGGCAGATTATGAAAGGGAAACAAAGATTACCTGGGAAGAGTTTTGTGTTTTAGTCAACTGAATTACCAGAATGGGCA
GAAAAAGGAAGTATCAAAGAAGGGTCTGCTGATAGAAAATTAAATAAAGAAGAAGATGCCATGGAAACGTTTTTAGTGC
AAATACACTATTGCTCATGGCTGAAGACAGAAAGAAGACTATGTGTGACTTCCAGATGAAGTTCAGGCATAGAGGCAGG
GCTAAATAAACAAGCACATAGACCCGAGAATTCTCGTTGATTGATCTTTGGAAATTCGGTATAAATATGATCAGTTCAA
CCATGCCTTAGCTACTGGATCAAAGGAGACATCTACCGGCTTTGGGAGATAGGAATCTGGAAAATTGACAGACTGAAAA
AACCAAAACCAAAGAAAAAAAAAAACAAAAAAAACAGAGAATGCAGAATGCCATTTTAAAAACCCTAAGAGGCTGTGTC
TGATGTTACAGGACTCTTTGACTCCATTAGTCTCAATTCTAATATTTAAGTTAAGTGATTGTGGGCATAGAATTTTTTT
CAAAACCTGTTTCGAAATGAAGGCTTCCCATACATTGAAGTTAAAAGTGGTCTTGAGAAAAGAACTTCTTAATAGGTAA
GGGGTTTTACTTTGGAATGTTGAAAATGTTTGGAACTAGATAGAGGTGGTGGTTGCACAACATTGTAAATGTGCTAAAT
GCCACTGAATTCTTGACTTTACTATTTTTAAGTTTATGTGATATGAATTTCACTTCAGTAAATTATCTTTGTTGGTGCA
TAATTACTGTATATATTTATGGGGTTCATGTGATGTTTTGTTACATACACAATATGTATAATGATGGAATCGGGGTATT
TACGGTATCCATCACCTCAAGTATTTATCATGCCTGTGTGTCCTCTTTCTAGCTATTTTGAAATATGCAATACCTGTTG
TTAACTCTAGTCACCTAATCTGCTATGGAACATTAGAGCTTATTCTATCTGTGTGTTTGCACCCATTAATCAATCTCTT
CATCCCCTCCCCTCCCACCTACACACTCCTCCCAGGCTCTGGTATCTATCGGTCTACCTTCATGAGTTCAAGTTTTTTA
GCCCCTGCATATGTGAGAACATGTGATATTTATCTTTCTGTGCCCAGTTTATTTCACTTAACATAAAGATCTCCAGTTC
CATCCATGTTGCTGTAAATGACGATTTTATTCTTTTTTATGGCTGAATCATATTCCATTGTGTATACCATGTTTTCTTT
CTTTCTTCCTTTCTTTCTTGCTTTTTTTTTTTTTTTTTTTTTTTTTTGAGATAGAGTCTTGCTCTGTCATCCAGGCTGGA

Fig. 9.313

GTGCAATGGTGCCATCTCAGCTCACTGCAACCTCCGCCTCCCGGGTTCAAGCAATTCTTCTGCCTCAGCCTCCCAAGTA
GCTGGGACTACAGGCGAGTGCCACCATGCCCGGCTAATTTTTGTATTTTAAGAAGAGATGGGGTTTCACCATATTGGCC
AGGCTGGTCTGGATCTCCTGACCACGTGATCCGCCCGTCTCGGCCTCCAAAAGTGCTGGGATTGCAGGCATAAGCCACT
GTGCCTGGCCGTATACCACATTTTCTTTATCCATTCATCTGTTGAGGGACCCTTAGGTTGATTCTCCATCTTTGCTATT
CTGTATAGTGCTGCAATAAACTTGGGGATGTAGGTATCTCTTTGATACACCAATTTCTTTTCCTTTGGATAAATACCCA
GTAGTGAGATTGCCGGACATAGTGGTTAGTTCTATTTTTAGTTTTTTGAGAAATCTCCATGCTGGTTTTCATAGTGGCT
GTACTAATTTACATTCCCACTGGTGATATGTAAGAGTTCCCTTTTCTCTGCATCCTAGCCAGCATCTGTTATTTTTTTT
TTATTTTTTATTATTTTTTGCATTTTTAATAATAGCCCTCTAACTGGGGTAAGATGATATCTCATTGTGGTATCAATTT
GCATTTCCTTGATTATTAGTGATGTTGAGCATTTTTTCATATTGGACATTTGTATGTCTTCTTTTGAGAAATGCCTATT
TATGTCCTTTGTCCACTTTTAATGGGATTGTGTGCTTTTTTACTATTGAGACGTTTGAGTTCCTAATATATTCTGAATA
TTATTCCCTTGTCAGATGAGTAGTTTGCAAATATTTTCTCCCATTTAATAGATTGTCTCTTCACTCTCTTGATTGTTTG
CTTTGCTGTGCTATACAGAAATTTTTAGTTCAATACAGCCCCATTTATCTATTTTTGGTCGTGTGGCCTGTGCTTTTGA
GGTTTTAGCCATAAAATCTTTGCCTAGACCAATGTCCTGAAGTGTTTCTTCTGTGTTTTCTTCTAGCAGTTTTATGTTT
AAGTCTTTAATCCATCTTGAGTTGATTTTTGTATGGTGAGAGATAGGGGTCTACTTTCATTCTTCTGCTTATGGGTGTC
CAGTTTTTCCAGCATCATTTATTGAAGAGATCTCCTTTCCCTAATGTATATTCTTGGTGCCTTTATAGAAAATCAAATG
TATCTATCATTATGCTCTCTGTCTACTCTAAATCTATCAGTCCACTCTGTAAAAATGTGGATTTGTTTCCAGGCTCTCT
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CAGGTAGTGTGATATATTCAGCTTTGTTCTTTTTGCTCAGGATTGCTTTGGTTAGTTGTGCTTTTTTTTTGGTTCCATA
GAAATTTTAAGTTTTTTTTTATTTCTGTGAAAAATGACATTGGTTTTGATAGGGATTGCATTGAATCTGTAGATTGCTT
TGAGCAGTACAATAATTTTTTTTTTTTAAAGAGAAAGGGAGAAAGAATTGGGCACTAAGTACATCAGAGTAGATGTTTAT
CAATTTTTTTAAAAATGGTCTTGGCTACCATAAACTGTGATGTTCTTGAGAGCTTACATTGTGTCTTGTTGATTTTGGA
ATTGTTGATACTCAAAGTGCCTGACACATAGACTTGATTCATATGTATTTAATCAATGAATGAATGGATAACTCTGACC
TCCTCTTAGTGAAGTGCACGTCATGGGGCTACCACTTGACTATATGCTGTGGGATAGATCAAAGAAAGGTAGGACACAA
CCTTGAACAAAATTAAAGTAACCTTCAGCTTGTTTATAAAAAGTGTTCTGGTGGAGAAATAATGAATCTTTTCAGATTT
TAGAGTGTTGCTGATTTGATTTCAATTTGCATTTTTAACCATCAGTCTCTGTGGAACTTTAGTTTATAGGTAGGACTTT
TGATTGAGCTTGGTGGCTCACACCTGTAATCCTGGTGCTTCGGGAGGCCGATGTAGGAGGATCACTTAAGGCCAGGAGT
TTGAGACCAGCCTGGGGAACAGACTCTACTAAGAATAAAAAAATTAGCCAAGCAGAGTAGTGCATGTCTGCAGTCCCAA
CTACTTGGGAGGCTGAGCCTGGAGGATCCCTTGAGCCCAGGAGTTTGAGGTTACAATGAGCCATGATCCCACCACTGCA
CACTGGCCTATGCAGCAGAACAAGACCCCATCTCAAAAAGCAATGACACACAGAAAAAGCAGAATTTTAATTTGTTCTG
CTCTTGTCTCTAGCACTTCATATCCATTTCTCTGAATATGAACAGTGGGAAAGGTAGTGGAATTGAAATGGATCATAGA
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TGATTGAAAAATAGTGTTACTGATGTAAAAGTCACCATATTTTAAGCTTTCTTTATGATAGTCTTCCATTATTTCCTTT
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AATTATTTCAATTTCCCAGATAAATGTACTTCTGTGGACAGAGGCCATATGCTGGTAGCCCCTATACAATATATAGAGA
GCATAAATTTCCTCTTCTCTCTTGGTATTTAAAATTAGGATTTTTATAAAATGCATTTTATTCTTATTTTGCCTTCTCC
ATCATTAGAAAGATTCCTGGATCTGTAAACCAAAAATAATAGTAATAATAATGATAATAAGATTTTGGCAATTTAAAGA
GAAATTCACTTTCGTGAATATGGTCACGCCAGCTATCTTTTGAACCTTAAAGGAGGCAGGAAGAACATTTGAATTAAGA
ATTTTGGAGTATTACAACCTCATTTGGTTCTCAGAAGCTTTTTTTAATTTCATCTTCTCCACGCCAGTTTATACAATTC
TCTCATGCCTCACTTTACTTTTATATCTTTTCTTAAAAACAGTTTAAATTGTATCCTCCCCACCCCACTTTATACAATT
CTCTCATGCCTTACTTTACTTTTATATTTTTTCCTCCATTCTTCCTTGTTTCATTCATTCACTCTCCCAAGTCCTCTGG
CCTAAGTTTTATTTGTGTGGTATTAAGCAGAGACCAACAGAACAACTGTGAAGACTTCTTGGGGATAAACCAGGTTTCA
CTTGAATTGTGGTGCGTCTGCCATTGGTGTGGAAGCAGGGCAGAAAGAGGACAGAGGCATACCAGCAAGTACAGACATC
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GAGGCCTATTTTTTTTGAGTAATCAATATTGTGGAAAAGTGCTAGAGCAGACCTACCTTATATAAATTAATTTGTTTGA
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GGAAAAAATAACACTTAAGCAGCTTATTGTATAGCAGAGAGGTGGTTGAATTGATAGACAATTAAAATACAACGTGTTG
AAAGGCCTGTTAAAGCCACAGGGTCACTCAGTGGCAGGAGGGATTCAGTCAGCCTGGGCCAGCCATGGCAAGTAAGTGG
CCTTTGGAAAGTTACCAAGGTAAGACATACCTGATACGTTCAAGAAACAATTCCAAGGTTCAATAAGGCCAGAAGTTAA
AGGGCAATGTAAGCCCTGGAAACTGAGGCTAGAAAGGTAGAAGGATCTCTTTTTACCACACACTGTGCCGGGCACCATG
AAGAATACAAAATAGCTAGCTATTATGGAGCCTACACTTTAATGTGTGTACATAGATACATGTCCATGTTGGAATTTAA
CTCCTTGAGAGGTCATGAATTACTTAGTCCCGGAAGCATTTGAATTTATACTGGAAAGCTATAGTAGAGAGTTGACAAA
ATATTTTAAATGTAGTAAGAAGAATTTGACAATCTATTGTGTGGTATGCTAGCAAGCCAGTTCTCCTTCCTCCTTTTCT
CACCATCCCACCACCCCTCACAAAAWAAAAAAAAAAAGTTAAAAACCTGATCTGCAGTGTTTGTCTATGGCCATGGTGC
AAATACTCCTCCCATGGCTGGTTCCAAGCTACCACTGGTTCAACAGTTCTTTTGCAGAATTCTTGAATCTTTAACACTT
AACAAGATCCAGTTCCAGCATATTCCTGCAACAGCGATTCTGCAGTTCTCAATGTCAAATAATAGAACCAAAAAGTCAT
ATAAGTACTACAAAGAAGAAGAGAGAGTTGAGAGCCAGCTTAGCCAGGAAATGCTCCAGGGGGAAGTAAGGCTTGAGTT
GGGACTTATAGATAAGAAATGTAAATAAAAAGGAACAAACACTCCCACCGTGATGCACAAATATTGGATCATGTATGTG
TGTGACAAGTGTGGCCGTCTGTAGTGGAGGGTCCAGGTAAAATTTAGGCCATGAAAGCCTTGGTCTGTCAAACTAATAC
ATTTGTTACATTAAAGTTAGTAGACAGCCATTAATGGTTTTTAAAAACAGATGGTCATAGCAATGTTTTGACAAAAGC

Fig. 9.314

AATTTTTAAGGAAGATTTTGTTTTTATAAAAAGTTGAATTATTGATAGCAGTGAGACCCCAGAATAGAATAAGAGACCT
GCCTCATGTAAGTGAGAGTAATTCAATTCAGCAGTAATCTTGGAAATTTGTAACTTCTGTGGTGAGAAATTGTATCCTG
GGATGTTGGGTAAAGCCACTGTGAAGCCAAAGAAATTAGTGGCTAAACGTAGAGAAATTAAGATGAAGGAACTGGCACA
TGGAGCCACTGTGTACTATAAAGTATTTTTATTGGTATTTAGTCTTGCTGTTATTGTTGCTAATGATTGTATTGAATAA
TTACCAGCTGTTGTTAGTTATTTGAAATTAGGTGCCTAAAGCAACCTCTCATCTTGCAGAAAGTCATCTTTCTTGAAAC
TTTTTAAAAACTTGCTTGAAACATGGAGACTTGGAATGGGACGTCTATCATAGTAGCACATCTGAAATCCTTCTCATTC
CTGCTGTCATTTCTGTCCTTTCGCAGTCCACTTTGTCACCACCCCCACCATTCCTTGTTCTGCCTGCAATCCAGCTTTC
CAGTCACTTTCTCTACTTCTTGCCTGGCTGCAGCGTCATCATTTAAACAGCTCTGGGTTGGTATCTCCTTTCACCAGAA
TTCCTGCAGCCGTGGAGTACGTGCAGAGCATCTTCCTTTTGACCCTCTTAAAATGCTGAGGGGTGTTTCCGACACACAT
TGCTTTGTAATTCAATAATAGGGCAGTTGTGGGTTCTTTTTATTGCAGTTATGCTGATTTTTAAAAGCACTCTGAGTAA
GAAAGGAAAGGTAGTAAAATATACGTGTACCTCGATGCTCATTGATCACGTTTGCACATGTTCTTGCCAAATGTTGTTT
TTAAAACCTGTCTCTGCAGGTCTGAGCTGTGAAAGTTTGGGAAATCAGGGTCAGAAGGCAAAAAAAATTCGTTTGTATC
ATCGTCATACAATATAAATTACATGTAGCATATACATAGAAAACAATCCAAGGGATGAGCTTCCTGGAAATCATTCCTT
CTTGTTTACTCTGATTATATAATGGGGAATTGTATGCTTTATACAATTTTAATTTCTTGAATATATGTGCTCAAAAAAC
ATTATAATGTGGTTCAGTACTATATATGCTGAAAACAGGTTGCTAATGAATTTGGACAAAGATTCCCATTTTATTTCCT
GTACGTTTACACATTTTTTGGCTGTATATTATATTTACTATATATATTTATTAGGACTACAGCAAACGCTAATTCATCG
ACTGAGATAAGAAATGTGTTTTCCATTAATAATTATAAATCTGCCAGAAGATTGTGAGATTTACATTGTTGGGGATCTA
AACAACCAAAATCATTGCAAAGTTATTTTAAAACTATTATTAATTATTTATGTAATCATAGATTATGGCTTGCAGAAGA
CTGAAGAAATTGTTCAACAAACCATGTAGGTTTTGTGGAAGAGCAGTAGACTTTGATAAGTAAGCTCAGAGTGGTCCAT
TAACCTTTTCTCTATATGTACATTATGTGTTGATAAGCATGATATCTATTATACCTCAATTATTAATAACAATATACAT
CCTAACTATTAAGAACTTAGCCTGCAACCCTAATAGTGTCCCCTTTCTTCTAGAACATAGATCAGCATAAGGAAGGAAG
CAAAGGAGGTCTCTAAGCACTCAAAATAGATGTTCACAATGTTCACTCACTGAAGATAATGTAGGTCATTAGCCAGAGA
AATGTATGTTCATATTTTAGTGATGATTCATACAAGCTTGGTCATGTGGTTCTAAACCTTCTATAATTGGATGAAGCAA
ATTAAGAAAGGCTGGGTAGGAGATTTCAGGGAAAGTCACAACTGATATTAGCCAAATGTCAGCTGATGGCCTGAAAACA
ACAACAGAAAAAGAAAATCTACAAAATCATTTGAAAACCACAGACATAGCTATTTGGGGCCTTTTTGAAAGGGGCAATA
AGCTCAACCCATCTTTGGAAACACTGAGCGCATCCTGTCTGGACAACTGAGTATAATTTTTGGTGTTCAAACTGATGAC
CCCAAATCATCAAAAAATACAAAATTATATTTTGCTCAATCTGTATTGCTCTTCTATATTATGGTAAGATTTCTGTTTA
GTGCACTTAAAAGTAAGACTACCCCCAAATTTAATCCCCATCCCCTTCAATGTCTCCTCCTGGACATTGCTCCATCTAT
CGCCCCTTCTCCCTCTTTCTTTGACCTACTCTTTGATGGCTGCATCTCCTTCAAAACTGGTTGAAGTTCCTAAGGAAAA
AATTCCCTTCCTCTTTGATCCTGTATCTTCCATCAGTTATTACCACATATCTCTATTGATTTTCGCACCCAAACTTCTA
GAAAGTTTACACTTATCATTTTCTTTTTCTTTTCCCCCCACTTATTCCTCTACCCCCTTGAAGTTAGCTTGCAGCCCCA
CCACTCTGTTGCAACTACTGCTGTAGTTCCTCTGCTCTCCCAATTGCCAAACCAAGTAGATATTTTTCAGTTCATTTCT
CATCAAGTTTCTCTAAGTCAATTGCCAGTGTATCCCTCTCAAAAACCTTTCCATCTTTGCATGAGGTCGTACACTCTTT
CTTTTCCTTTCCCCCCACCCTTCCTTTGACCTGGGGTTCCCAGGATCCCATTCTCCATTCCTGCTTTCCTCACTCTGTG
TGTCTTCCAAGACTGACTTGTGCATTCTTATTTTAATTACCACCTGTTTGCTGAAAGCCCCTAAATTTATATAGAAATC
CATCTTAACCTCTTCTGCAAAGCTTGGAACCCCAATATTTATTGGAAATTCCCAACTGAGTATCCCATGGGTTTATAAA
ATTCTTCATATCCAAAACCAAATTTAGCTTTTCCTCTAAATTTGTGCCTCCTTATATATCTCAGTTGGTGACACTACCC
AGCTATCATGTTCAGAAAATAAAATAAAAATACGTCATAAAAGCATCAAAACTCTATAAATTTATCCATGTAAGGATTG
CCACCATTAATATATACTTTAAATCCTTCCAAATGTTTGTATACTTGTATATATTTAAAGGGATCATATTTGGTGACTT
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TCTGTTGTATCACTGGGTATAATGTCTGGCATTTGCAGGTGTGCATGCAAGGAAGGAAAGAAGGAAGTGAGGGAAGGTG
GAAGGAAGAGAACAAGGAGGGAAGAAGGGAAGGGTAGACACTTTGGGAGGCCAAGGCGGTTGGATCACCTGAGGTTGGG
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TGCCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCGCTTAAATCTGGGAGGCAGAGGTTGTGGTGAGCTGA
GATCGCGCCACTGCACTCCAGCCTGGGCAACAAGAGCGAAACTCTGTCTCAAAAAAAAAAAAAAAGAAAGAAAAAGGAAG
AGAAAAAGAAAAAAGGAAGGGAAGGGTAGAAAGAAGAGAGGAAGGAAGGGAGGGAGGGTTGAATTATAGATTTCCCCAA
CTGCCTCCCACACAATGTGCTCTAACCATAAATTCTTCATCTCAGTTGCTCAGGCCAAAGCTTGAGAATATCCCTGTGT
CTACTCTTTTTAGAACATCTCGTATCTAATACATTAGAACTCCTGAAGCCTCTGCTCTCAAAATATACCCAGAGCCCAG
CATCCTTGTCACCATCTCCATGGTTACCATCCTATTGCAAGCCACCATCTTCTCTGGCTTGGATGATTGCAGTGGCTGT

Fig. 9.315

CTAATAGGAGACCCTGCATCTCCTCTTGCTGCATAACAGTCTATTCAAAAGACAGCAGTCAGTGCAAATCATGTCATTC
CTCTGCTCATAACCTTGCAATGGCTCCCATTTCCCTCAGAGTTAAAAGTGATTATTGTGGCCCACAACGTGTAGCCCAA
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TAGGGCCAATTCCATTGCTTTAAGTCTTTGCTTGTGTTTCATCTCCATTAGGCCATCCATGACCATCCCATTTTTTAAA
TGCATCGCACATTAATACCATTCCCAATGTCTGCTCTATTGTATGTATGAGTGCTTGTTTCATAGCATGTCTATCCTTC
TAACACATAATTTACTATATCTATTGTTTATTATCTCTCTCCTGTACTAGACTGGAAACTACCATGTGGAACAATCTTC
GCCTATTTTGTTCACTGATACAGATATATATACACAACAGTGCCTCAGCCATGCTAGGTTGCTCAGTACATTCTTGAAT
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CTTTGGTCTCTGTCTCATTCCCCTTGGGATTTAGAATAGAAAAATGCAGGTGGAGAACACATTCAAACATCCCACACTT
TATCAGTATTTTAAAAGAAAGAAAGTATGGCTTTTTTTTTCTCAAAACAATGTCTTAGTTATAAACTGAATTTGTATAA
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GAACTATCCCCAGTGAGACCACAGAAAAGCCAGAAGAAGAAAAGGTGGGATTTGGGGTAGAGAACGAGCCACTTCTCAC
TAGTTTGCATGAAGCATTGAATATCCCAAGGGAGAAAACATTGAAGTTCTATGAGACACCAAGAAAAGTGTATAGATTA
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CTCAAGTGATCGGCCCGCCTTGGCCTCTCAAAATGCTGGGACTACGGGCGTGAGCCACCGCACCTGGCCAATATTTTTT
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GGATACAAAATAATAAAATTCAAAATAAGTCTTGACTAGTGAGTGTAGAAGGACAGTGCTACATCTGAATCTCCAGTTG
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TGCAAACAAACTATTCCAGAAAGTGATGTCTTGAAACACAACCATTCTATTTTGCAGTCTGTGCTGGGCTCAGCCGGGC
AGTCCTGCTGGTCTTACCCATGGTCCCCAATATGGCTGCAGTCACTCCAGTAGACTGGAGGCTGGGCTTAGCTGAGATG
ACCTGCTTTCTTTCTTTCTTCATGTAGTCTCATGGCTTTTCTCTCTCTCCATGTGGATTCCTCATGTGAACTCTCCAGC
AAGGTAGTCAGAATTTCTTCCCTGGCAACTCAGGGCTGCCAAGAACACAAAAGCCAGGCTTTCTTAATGTTTAAGCCCA
GAACTGGCATGTGGCCAATTTTTTGTGTTCTGTTGGTTAAAGCAAACCGAGTCAAGAAGAGCCTACACAAGTAGTAATA
TTACAAGTATGATGAAATATCATTCTCTTCTTAGACCAAACAGCATATTCCTCCCTCCACTCTTACCCTCTATAATGTT

Fig. 9.316

TTGCTTTTGGGAGTTCCTTTATATGAAATGCCTCCCCTCTACTTCTCCTTCTACTGAAATCCTACTCATCCTGAATCCA
GCTCAGAGCTAACTCAGTGATTTCCTTCATACATCTCTATTATCTCATCCTGGAAATAATCACTCCTGCCAGGTGCAGT
GGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGACAGGCAGATCACTGAAGGTTGGGAGTTCGAGACCAGCCTG
GCCAACATGATGAAACCCCGTCTCTACTAAAAATGCAAAAATTAGCCAGACATGGTGGTGAATGCCTGTAATCTTAGTT
ACTTGGCAGGCTGAGGCAGGAGAATCACTTGCACCTGGAGGCGGATGTTGCGAGCCAAGATCGTGCCACTGCACTCCA
GCCTGGATGACAGAGCAAGACTCCAGCTCAAACAAAAAAAAGAAAAAAGAAAAAGAAAAATGCCCTCAGCACTCTCATA
GCATTATGTCTATATTTCATATTATGTCTTGACATATAACTTTACACACACACACAAGCACACACACACACAGATGTAG
CTTGCTTTTAGATTTTAAGTTGCTTATCTAAGATTGGGTGATCAATAACTGTTTTTTCAAAAAACATTAACTGGTTTT
CTATGACTTTTAAATGACAGCTCTAAATAATTATAATTTCTCACTAGTTTAAAAAGGCAGGTGGTGGGATATTCAAAAC
TATTGGAGAAAAAAAGCTGATGTATGCTACCAGCATAAAACAACAATTGCCCTTTACATCTTCAGAAACCCCTGTACTG
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TCACCGCAAACTCCGCCTCCCGGGTTCAAGCGATTCTCCTTCCTCAGCCTCCTGAGTAGCTGGGATTACAGTCATGCGC
CACCACGCCCGGCTGATTTTGCATTTTTAGCAGAGGCAGGGTTTCACCATGTTGGTCAGGCTGGTCTTGAACTCCTGAC
CTCATGATCCAACTGCCTCGGCCTCCCAAAGTGCTGGGATTACAAGCATGAGTCACCACGCCCGGCCTAACATGGTGGT
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CCCTTAGGTAGTTCACACCTTTCCAAAGGAAGCTCAGTGAACTTCCTGAAACTGTGTAAAGAATTGTGTGTGCAGTATG
TGCATGTACATTATCTGTATTTTTCTGGGTGGATGATCCAGTATCCTCATCAGAGTCTTAAGTTTGAGAAACCCAATTA
TATATTAGTTGTAAATCTGTTTACTTTCTTAGAATTCTTCTCACATTAAAACTAAGATTATATTTCTATTTCATAGGTA
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TAAATTGACCCACTCGCTACTGAGTCTGACCCCTGGGCCAGTCACATCGGTGCTTGTTAGAAATCAGAATCTTGGAACT
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ATCTAATACCCCACTTTCTGCTTTTTAATCTTGCAGGATTTATGTTTTAAATTCTTTATAATACTATTAACAATTATCA
TTTGATTTCTATTTTCATATCATCTGACAGTTTTGATTAAATCCTTTAACCTCAGGATTTGTAAGGGGTAAGGGGAGTG
GGTTAACTAACTGATCTGATTATCAAATAATGCTACCATTCAGGACTTATGCATAGTTTCTGTGATTCTCAATAGAATT
TGATGGTACCTACAACCTCTACTCCTTGTTTTAGTGTCTATGTTTTTCCACTGTGCTTAAAAACATTTAAAGGGAGAGG
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AGTTCTAAGTTAAGCACACATCTTTTTGGCTATATGGTGTATATACCAGACTATCCTTTTTCTCCAAAATTTGACTTTC
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GTAATTTGGGTGTACAAAATGCCTGTAGTTCAAAGTGCTTTACTCCTCTGCAGTGGCAAGCTGAGCTTCCTGTTGGCTG
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TCAAATGCCATAGGCCTTAGCTCCAGGACATTTTCTGCCTGTCTCCTTCCCTCCCTCCTTTCTTTCTTTTCCTCTCTCC
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TGTTGTGAATTACATGGGGCTGTGGTAAAATGTGGCACATTTCAAGGCTATGTATCCCTTTAGATTCTGGTTCAGTAAG
CTTGGAAATAAATAGGAGAGCTTACGCTTTTAACTACTAGCCTGCGATTCGTATAATCATGTTAGTTTGAGAAACACTA
CAGTAATCACACATGTAAGGGCTTTGGAGTAAGATGGACCTTGGTTATCCAACGCTTACTGTGTGACTTTGGTAAATTA
CCTAAACTTTTCTAGCCTTGGATTTTAATGTGTAAAAGATAGATAATACTAACTCAGTAATTCTTTATGGGTTCCATGA
GACAATGTATTTAAAGCACCCAGCATACTATCTGGTTCATAGTTTACAGTCAATAAATGTTAATTCCATTATTTGATCA
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TTTCAGGTTCAGAATTGATTTTCTCAGAACCCAATTAGATCAGGTGCTGTCACTGACACTCAGAACTCATGAACTTTAT
GCAAGAGCAAGAACATGAATTAGGGAATTCACAGTGAGAAATATATTGACAAGTAGACAGGATACCATATTGGCCAGAT
CAGTTCATTCTGTCCTTGTAGTTCAGCCCCTTGAGAAACAAACTTCTAATTAGAAGCTGCTTTGACATATATGGAGTCA
GAAACTAGGAACTGTAGACTTTAAAGGGCTTTCCTGCATTGGGTTTTGAGATTCTTCCTCCTTTTATGGTAGTCTTAAC
ATTCGGCTGTTAAGTGTTATGCTCCCCCTCCCCAGGCATGCCAAGTATATACTGACCAAGTGTCTTCTTTATTTAGCTA

Fig. 9.317

CCATATGAGTGGTTCTCAAACCCATGCCCTTGTTAAAACACAGATTACAGAGCCCTATGCCCCACAAATTCTGATTCAG
TACTTCTGGGGTGGGTCCTGAGAATTTTCCTTCTTATAAGTTCCCAAGTGATGCTGATGCTGATGAACTGCTGGATGGG
GAACCCCCTTTGAGAAGCACTGGGTTCCTCTATCATCTTCAGCTGACAGGCTTTTTCCCCTTTGAAGGGTTACCGCTAT
TGTCTGTGTCTCTGCTTTAATATGCTAATATAGCATTATGGTCATATCCAGATCCTGAGGTTGGAACCTGGGTCTTAGA
ACAATTTTTAAATTGTTTATATTTTTAAAGGTATTTGATTTATTAAAACTATTTGATTACTTTATTTCATCAAGTCCAA
GGTGCCATTGATTATAAAAACATGTCTGGATTTTAGAGGCATTAAAAATGTAGGGGCCAGGCGCGATGGCTCATGCCTG
TAACCCCAGCACTTTGGGAGGCCGAGGCGTGCAGATCACCTGAGGTCGGGAGTTTGAGACCAGCCTGACCAACATGGAG
AAACCCCATCTCTACTAAAAATAAAAAATTAGCCAGGAGTAGTGGCACATGCCTGTAATCCCAGCTACTTGGGAGGCTG
AGGCAGGAGAATCGCTTGAACCCAAGAGGCGGAGGTTGTGGTAAGCCGAGATCATACCATTGCACTCCAGCCTGGGCAA
CAAGAGCAAAAGTCTGTCTCAAAAAAAAAAAAAAAAAAAAAAAAGTAGGGAAAAAATTAACAGTTTCAGAGGTACTGCAA
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CTACTTAAATGTGACCCTGAAATGCCAGATCTTTCCTTTGGAATGAATCTTTTTTGTCTTATTGGACTGGTAGGGCTAT
GCACTTAAAAAAAAAAAAAAAGTTGATTATTAGACTCACTGTTTCCTTGGCCAGTCAGGAAAAGATATTTAGGACAAGAG
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TTTTTGGAAAAATCATTAAGTGGATTCCCTTAGCTATATAAACATAAGGCCTGTCATCTTTTTCTTTGGAGAAAGAGTG
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CTGTGTAGAGGAAGGGGAAACCTAAGCTGCCTGCTCAAGAAGAGCATCTTAGATTGTTGAGTGAGGGCTGATCTTTACT
AAATGAGTTAAATCAAAGAGCCGAACTCTTGGAGTCCAAGGCTGGGCATGGAGACCCAAACCAGCAAGGACACAGGTCT
GGACAGGACCATTGTTCACTGTGATACCACATGGCAGTGGCAGAAGCCTTCATACCAATTGCCGTCCTCTCTACACCTG
AAGTTTAGAAGCACGACTCTGCTTTAGACTGAATAATCCCTGAGGTTCTTGGGTTATTTGAAAGAGGGGTAGTTTTCAA
AAAGAGAGATATTAGATTTCCTATTGAAAGGGCAGCCCTGGTCTCCAGTGATTAACTGGAAAAACAAAAGAGATATAAC
AATTTTTACATCTAAGTACTGTGCTAGCTTCTGTGGATCTAGAATCAAATGAGACAAGATGTAGTATGACAAGCAGTTA
GACTCTCAAGAAAATCATTCAAGTCTGTTTAGGAAAACTGACATTCATTCATTCAGCAAACTATTGAGTAGCTCCTGTG
CATCAGAACCTGTATTCACAGTCAACTGAAATAAACACAATTTCTACACGAGTGGAGTTTTCCAAATAGACTAAGATGT
CATAATGGACTGTGTGTAGAGTAATGTTCAAGTTTTTTTGTTTAAGCTTCCCCATCCCCCAGAAAATACTGGATATAT
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GGAATGTTCTAAGCATGACATTGTGAAAGAATGCTAGAATCTTTTTCATATGAGGGGTGTTATGGAAAATAAAGAAAGT
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CTGAAGGAAGCATATGCATTATAGAAGTTCTCATCCTGGACTGTGGTTTGTTGAGAATGCAGCTGGGTGGAGTCTGAGG
AAGTAAGTGATGGCCATAATCGAAGAAGAGATAAGAGGTAAGAGCAATGGCTTAAAAGCAAAAAAGCCTCAAAACATTC
AAACTTCCTTTGTATAATAGTGGATGTTATTTTGAGAATGTCAGTTTCAGGAGATACCATAATCATGTGTTTGTCTGTA
TTTAAAAAGCCACCACCATAAAAGATCTAGAGTCACTCATGAAGTTCAAGTACCAATTTTTACCCATGAGTGTGGAACA
TTCTGCTCTTTTACAAACAGTAACTCGTACTGTCACATTTTGCGGCGCATCTCTCATTTTGTTGGTTATTTAGTGGCCA
TGTAAACATGTACATGACTTGTGGTGAATATGGTGATTCTCACTTTATAACCAAAGAGGGTGGATGTTACAGCATATGA
GCAGTTATGACTGTAAAGCCTGAAGTGTGAGTCACAGGGTCTGACCCAGGTAGTAAGATGTGTTATTTGTTCATGTTGG
TTAGCTGAATTTCCTGGGCTGACCTCACTGAAGTTTGCTCCAGTAAAGAACCGGATCTTTACTGATAGATCAAGGATCT
GAATTCTGCACCTAGTTCTTTGGCTAACCAGTTGTGTCCTTTGGGGGAAATTTCTTAATCTTTCTGCTCTCCATTTCCC
TTTCTGTAAGTAAGGGATTAGACCAAATTCCATCCAGGATTGAGAAATTCTATGGTGTGACAAAGACTGCTGGTGCTGA
CTGAATATCCTTACAGATTTGTTCATTTAGTAACCAATATAATAAAGATGACTGACTGAATCTTAATTATATTGGGTGA
CATCTGCCTAGTCAAAAGATTGCATTTCTCAGGCTTTCTAAGAGATTGATGCAGCCAACTACATGTTAGCAGAGGGAGC
TCCTGCCTAGAAGCACTCACTTTTACTCCTCCTCCCGTTTGTGTAGTAGTGATTTGGTGCTGGTGCTGGCTGGAGCATC
AGTAGCCATCTTGTAACCTAAATGGCAGAATTGAGAATGGAAGCCATGTGTTACGGATGGTGGATCAGAAAGATAATAG
GAACCTAGGTCCCTGATAAACATGGTGTCACCATTCCAACCTTGACCTGTTTCTAGATTATTTTCTTTACTTTTCTTTT
TCCTTTCCTCTTTTTTTTTTTTTTTTTTTTTTTGAGTCTTTCTCTGTCACCCAGGCTGGAGTGTAGTGGTGTGATCAGGG
CTTACTGCAGCCTTAGCCTCCTGCACTCAAGCAATTCTCCCACTTCAGCCTCACGAGTAGCTGGAACCACAGGTGCATG
CCACCATACCCAGCAATTTTTTTTTTTTTTAATTTTTTGTAGAGATGAGGTCTCACTATGTTACCCAGGCTGGTCTCAAA
CTCATGTACTCAAGTGATCCTCTTGCCTTGGCTTCCCAAAGTGCTGGGATTAAAGGCATGAGCCAACATGCCCAGGCTA
CATTTTCTTAATATGAGATAAAAATAAACCTCTTTCTTATTGAAGCCATTACTAGATGCCTAATTCACTTTCTAACTAA
CATATTAGCATCAGATTATCTTTATGTAATTTCCATTGCTAGGTTTTCTCTTTGCAGTATTGGAGACAATAGCTTACCA
ACTAGCTTGGGAACTTCTTAGTGCTATTAGAGTTTCAACACAATTTACCAAATTTCTAAAATTATTTAGTTATTGGATA
TATGAAAACATAATCACCATATGTGAAGAAAAAACCACCAATGTTTAGTACAAAAATTGGGAGGGGGAATATTATATTA
GAGAAAGTTTATTAATCCAGAAAACCACAGAATTTAAAAAATATTGGAAGTTGGGAATTTGGGAGTTAAAGGTACATTT

Fig. 9.318

GATCTTTGGTTAATGGCAAGTTCACATTTTATAATAGGATGTAAAACCCTATTTCTCACTGCACCTGTACTTTGATCTT
CTTGTCTGTCATTGCAATGTGATTATGAGGATTACTGGGTCACTCTCAGCCTAAGATGTTTTTGTGACTTAATTTTCTA
GGAGAGGAAGGGGATCATTAAAGGATATCATTAAAAGGAGAGACACAAGGCTTGTAATTGACCTTCCTTGAAAGTAGTC
CCATCTGGAAGATTTTATCAGTAAACATTTATCAGTGTATTTGGCTTTTAAGCAGACTCTTCTCCTCTTGTCTTTGAAA
CAAACAGGCAAAGGCTAAAAAGGAACACGTTAGTGCTCAAAGTTTGCTTCTTGTGCATGCTGAATGGGAAGAAAAAATAA
TATTTAAGAAAAAAGCTTTCTTCTAAGTTAATTACATGATTCTTTTTTCAGTTTTGCTTCAATGTTTCTGTTTGCCAAA
TTTTAATTGGCAAGTTATGGTGTTCTTCAATGATTATGCCTTGGTGTGATTTGCTTGGATGTGTGTTTAGAGAGTGGAG
GGTAGAAGGGATGAGATTTTTGTGAAATACAGTGAGCAGGGGCTTAGAAAACCTACTGCAGTTCTCTGTGTGACTAAGC
CCAGCACTAGTCTGAAACTTCGTATTGTACTTCTCTGGAATGCAATAACTATCGTCAGGAAGACAAACGTTGCTGTGGC
TTAAATAAAATAAACTGACATGATGTATTACCAGTCAAAATAAATTACCCAAACAGTCTTGTAAAGTTGTGTTTTTTGG
TCATCAGAACTGCCTCATTATTCATGTGTCTGTTTGTCTCTTTGGTTAGTTTTGCTTGTTGACTTGCATGTATCAATGA
TCACAATCCTTGTCATTTGCCAATTCCATATAAACTTTCAGAAAGTGAAAATTGCTTTTAAGAAATTTATTTTGAAGTT
TCTACTTATATTTACCCACATAATGCCCCTCACTGATAGCCAGCTTTGTTTCTTCCATTCCTTTGAGAATACTCCCTAG
TGAATTTAAAGAGTAAAATCTGATGTTGTGGATTATAATATTATACACCAATAAGTGGTTGTTACACACTTGTGTCCAC
ACTTGGTAAGATGTCCTTGTGGATGTATCTCTTCTATGTATAGTATATTAATGGCTTTATCCGCCATTTAATGTGGTTC
CCATGAGGTTTAGGTAGACCATAGATACTGTTTCAATTAGAACACTTCATGAGGATTTAGTTTCTCTGTCTATGGGTCC
TGTATCTGAACTCTCCATTTTTATTCTTTTGTTTGTTTTTTGTTTTGTTTTCTCCCTGATGCCTGATATCAGAAGAACT
CTCCATTTTTGGCTTCATTCTCTGCTCTATCCACATGAGACAGACCAATGTCTGCAATCTAGTGCCATACCTTTCCAGG
TTTTTTATGTCCAACAAAAAAAGAGAGCATCTCTTTCTAGTAGCTCCCACATAATTAAGGGTATAGCCCCTCTCCTGAA
CCAATCAGTCAATCACAGTGGTCCCATCTGACCATGGGGATGTTCCCCAAAGGAAATCAGGGTGTTATTTTTCAAAAGG
AAGAAGAAATAAATGCTGGACCTTCATAACAACCAATTGCCCACTAAAAGTGCAGTCATATTTCTTGATGAAATAGAAC
CTCTCCTTGTATACTGGGCTCCATGACACATTGATCATGGTTAGCTAGAAGATTCTGAAGTCTTATTATCCACTTTGCC
AGTTACATTTATTTGTAGCTCAAGGGGACTGTTAAGGGAAAGGGGAGCAGTGCTAAAAACAAATCCCATTCCAATATTA
TTAAAAAAACCATTGCTCTGCCCTTCCTTTATTCACAACTTAGTTCCTCATCCTCATCTTCCCCAGCTCCTCCTTTTCA
GCTATTTCCTCTGTAGGTGCCCCTACCACTAACTCCCACAGATTCCCCCATCTCCTTTGAAGAAAAAAGCTAGATGCTC
CCACTCCCTTTATTTCTTCCACAGTAACCAGCTTAACTAGCACACGGCTTTGTACATGGTACACAGTTAAGTAATATTT
GTGAAATAAATACGGAACACTTAAGGGAAATAAAAAGCAATCTATCCTCATCAAGAATGAGCTGAGAATCCCTGAGATA
GCCTATTTAGCAGCTTAGCCTGAATTCTGTTTTAGTTTCTGTTTCTGGAAACTCTTCTTATTTTAAGAAAGAATGATTC
TTATAATTATTTCATATTTGTTGATATTATCCAGTCTTAGCCAGTTATCAAAATGGTCTTGAGAATTAGGAGGGGAAAG
CATAATGTTATAAACATTTCAGCATATTGTGCAAGTAAAGTCCTGGTAGTCTGGGTAATTCTAGAACTCGAGTAGACTT
GAAGTGATATCAGAGGAAAGCTATTACCCAAGTTTACTGCTTGCTAATCAGGCAGCCAGCAATAATGAGATGGTACAAT
AGAAATGTTCAAAGTAAGGTTTCTTGGCATACATAGCTATTTAATTATTTTATTTCTGAAAGAACTATAGCTCCACTGT
TACCTAAGTTTAACCTTTAGGCATTTAATATAATAGTATCTCTAGTGTAACAGAGGGAATCAATTACTATGATAAACCA
TATCCTTTGTAAAAGAATACTATAATACCAAGAAAGGCTTTTGTCTTCATCTTTTTAGTTTTTGGTTATTTTTTGTTCC
ATTCCCTTTAGGTAAGAATAAGCATCTAGAATGCCTCATTATGAGATTGTTAATGAATATTTTCCATTGTAATTTAATA
AGCCTAAAAATAAGAAGATACTCCTCTACTTTGTCATACAAGATCGTTGAATGGTGGGTCATTAGTTGATAGCAAAAAG
TCACTCATTCTTAGTTATGTTTCTGATGACTTGAAAAATTGAGTGGCAGTATACAAAGTCTGAGCAAAACTGACTTCAG
AATGAGTATTTGGCTTTGATTTCTCATGGCATCTTGCCCATTGAGCCATCTTTTCAGAGGTCTCAGCTGTATGAAAAAA
TAGTACTTTTTTTTTTCCAGAAACATGAAGTCTGGCAATCTTTATAACTTTGTGCAGCTTGTTGATTCCCGGATTCAAT
GGTGTTAGTGAAAAAGAAGTCTCAGGAGCTCCAGAGTCTCAGAAGAATGACAAGAAGACCCCTAATTCTTGCCTGTCTC
TATATTTAGTATCCAAGTTGGGGATAAAAGCTAGTTTTTAAGATTTTCTGTTCAGAAATCTTTTCTATATACTATTCAG
AGGCAGCCCTTTGTTTAAACCTTTTTTTGTCTCAGGCATGGATTAACTGCAATTGGATTCTATGTTAAAAATGTATTTT
TTTGAACATTTTGTAGGCATCACTCCAGTATTTTCTATTGGTGAAATCCTGATCTTTTTCTGTGTAGAAATTTTTGTGA
CCTTCTTTTCTTTACTGAAGTTCCCACATTTCATGATCAATTGTCTTGGTCTGCATTTTTATCCATTGCCCTGGGCACG
CAATAGACCTTTTCACTCCAGAGATATGAGTCCTTCAGTTCTGAAATGTTTGCTCTTATTCATTGATAATTTTATGCCC
TCTATTTTCTCTGTTCTTTCTTCCTTGAATTCTCATTATCTTAGTTGGATCTCCTAGATCATATCCTTTAATTTCTTAA
TTGTTTTCTTCCTTTTTTGTCTTTTTGTTTTTTGGTCTTCTAGAAGATTTGTTCACACACATTTTTATTTTCCAACCTT
ACTATTAAAATGTTTATTTTGGTCATGATTTAAAAATAATTTAGCACTCTCATTCTCTCCTTTTTTTTTTTTTTTTTTT
TTTTTTTTTGAGACGGAGTCTTGCTCTGTCACCAGGCTGGAGTGCAGTGGCATAATCTTGGCTCACTGCAACCTCTGC
CTCCCAGGTTCAAGCAATTCTCCTGCCTCAGCCTCCCGAGTAACTGGGACTACAGGAGCATGCCACCACACCCAGCTAA
TTTTTGTATTTTTAGTAGAGATGGGGTTTCACCATGTTGGCCAGGGTGATCTCGATCTCTTGACCTCATGATCCGCCCA
CCTCAGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCAACATGCCCAGCCTCATCCTCTCCTTTTTAATGGTATATG
TTCTTATGTCAGAAGTGTGTTTTATCTAAGGTCACAGATTATTATCCTCTTGAGGTTTTCCTCTGTCTCTCTCTTTCCT
GTAGATTTCTTTCTTCAGTTGATGTTTGCTTCTTCTAGTTTCTCTTCTTCATTATGGAGAGTTTCCTTAAGAGGCTGTT
CATTCTTAGTTAAAAGCAAGACATATACAGGTGCATATGCACACACACACACAAAACAAAGCAACAATGACAATGATGGCA
AGAAACAATGTCAGAAGTTCTGTGATCATGGATAGGGCTCGTCAACTGTAGGGTTGCACTGTTGCATCATAGGTTGTTC
AATCAAAGCCGGTGTGTTCTTTGAAATGTTTCCCCAAGGTCATGATTAGGGGGTACCCCACTTTCTGCCTGCGAGATTT
GCGCCTGGGGCATATAACTGACTGCTAATGTCTGGGGAGCATGACAAATAAAAAAGTTGGGTTTCTTATTGCAAACTCT
ATAGGCTTTCAAATAAGCACCTATTTCGCAACCTGCAGCCTCTCCTAGTTTGCTACAGTGCCTAGTATCATCAGTTTCA
AATCTCTCTAGCCGATTTCCTCCAAAAAAGAAAGACTCCGCTTCCAGTAGGTAAGGGAAGTAGTTAGTTTGGATCCAAA
GGCTCCATATAATTTAATACACTTTCAGCCCCTCGCTAAACTCCTGCCTTCCTTAATTCTGCTGCCTCCAAGCAGTAA

Fig. 9.319

GTCTTTCTGGATTCGGGAGAACACATTAGTCCACTTTCTCTTGGAATTTACTCTCCGTAACCATTTCCTCGATTATGCT
AAGGCACTTCAGCTATTTTCTGATTTCAAAAAATCAGTAGAAATCTCTCCTTTGCTGATCTTGTTTCCTTTATTATTTG
TGCCTTTGTGGGTGGGTGTGTTGTGTTTTTATTCCTTTACTTTCACTTCAGTGAAGTATCAGTAAAAGAGAAAGAAGAT
AAGCAGGCATGATTTCACCCTCTCTTACTGGAAATCCAGGGGAACGATAGCTGAGGAGGAAAGTAGCTTGGAAGAGCAC
CTTAGAGTAGAAAAAGACGGGAGAAGGTGAGTTTACAAAAGTACAGCAAGATGATGATGATGATAAATAAAACTCAATG
CGTGCTCACTATGTATTTGCACTGTGCAAAGTTCTTTACATGGATTATTTATTTGTGTTTTTGTAAGAACACCTCAGGA
AGTAGCTATTGAGACACAGAGAAGTAATATGACTTGTTTAGGTTAGTAAATGGTAGAGGTGGTATTCAAATTCAGATCT
GATTTCAGAGACCATCCTCTCAACTGCCACACTATCTTGCCTCCTACAAATTGCTTAAGCAGGGATTTAAAATGAAACC
GTACTTTTACAAAAATCATTTTTCATGTCCATTATTTAGGAGTCTCTCTACTCTATCAAAAGTATTAATTGACCTATTT
ATTAATATCTTAGTAATGTAAAATGCTTTTAGGTTTGCAAATTAGTAAGAGAAACTTCTTCAGATTAATAGATGCTGTC
TTTATGAGGACTGCATGAGACTTATGTACTCATCATTATATACACCCACAGACGATCTATTTGAATTCTGTACTCTTAC
TCTTTTGTTAAATAAATGTACTCTTTCTAACTATGTTTTAAATCATCTGCAAAGAGATGGAAGCTGTGTGTATACAACA
GCAAACATCTGGAAGAAAAGAATATTCAGCCAAAGCTTGTTAAAGAGATTCATAAGCAAAGTATGCCTTTGAATTATGA
AAATGAATTCATGTCCAACATCATAAAGAACTCTGACATGTCTGTTTATGTTTCAAACATGGCTTAGAGATCACTGAGA
TTAAAATTCAATTAAGTGTGCTCTGTTGTCTTTGCTGTCAATTTCAGTTAAACCAGACTTGTTTGGCAGTTTTGGGGAG
AAAAATCTTCAGTGTTTTACCTTGCTAACATTTTACCATTTGGACTTTGTGTTTTTTCCCARTCAAATGCATGTCATTT
AAGGAGATGCTTCATGTTATACACACCTGGTGATTTTCATCAGCAGTTGTACAGATGAAAGAGAAGTAAAAGCCCCCAA
ATAATTCATCTTTTAGGCTTTGTAAAATTATCATTTTATAAATTTTTAAATTGTGAAATATAACAAAATTTAAGAAAGT
ATGTAAAATTTAAATTTTAAGTTTAACAAATTGTTCTAAAGTAAATACCTACTATGATCACCCCTCAGAAAGACCCTAT
AATTTCCTGTTTCATCCTCTCCAGATAGGTCACCACTATCTTGACTTTACTTTTACTTTTCCTACTTTTCTTTATGATT
TACCACGTATGTATGCATGCCAAAACAACAGTTCAATTTAGTTTGTTTTGCATTTTATGTAAATGGACTCATCTTGTAG
ATACTCCTGTGTTTTGCTCCTTTTGTGCAATATTATAGTTGTAAAATTCATCAATGTTGTATGTAGCTGAGGATTGCAC
ATCATAATATATATCATGATATATAGCATTCTRTTGTATAAAGGAACCACAATTTACTGTCCAATCTTCTTTCTTTATG
CAGTTGAACATATCCAGTTTGGAAATATTATGAATAAAGATATTTCGAACACTTATGTGCGTGTATCTTGATGCACATA
AGCGTACATTTTTGTGGGGGAATATACCTAGGAGTGGATTCATGGGTCATGCATATCTTTAACTTCAGCAGATAAGCAG
AAAGCATTTGACAAAGTGGTTGAGAAGGTAATGAGAATTCCTGTTGCTCCACGTTCTAATAAAAAACACTTGGATTTTC
TTTCTTTTTTTTCAAATGACAGGGCTCTATAATGGGATCATTGCATTTCTCTGATTACTAATGAGAGTGAGTACTCCTT
CATATGTTTAGTAGATATTTGAATTGTATTTGTTTTTGTTGTTGTTGTAGCTCTTCATGAAAAGTACTTTCTAAACAGC
ATTTCTGAGCACCCTTTAGGGAGCCAAAGGCCAAATAAGTTAGAGTATTTGTCACAACATGGCAATAAGAGAGGCGAAT
TCATCCATTAATTGCTTGCCATATGCTTATCACTGGAATATATTTTGCAGCATCTCCTGACATCACTATTTATCCCTTT
TACCAAAAAAAAAAAAAAAAAAAAAAGAAAAAGAAAAAAAAAAACATGGCTACTGATAATACTTGGGAGCACTCAACGAAGG
TCCCGTCTGAGACTCTGTAGAATATATTATAGAATGCAAATATTCTTTGGATTCCGTCTTGTTGTTGTTGTTGCTGTTT
CCTACCCTACAACTTTTGGCATCTCTACCCAACATTTTTATAATACAGGACTGTCTCTGAGGTTTGTTTTCCTTATGGT
TGTTCTCATGTATAAAAGAGATGATGATAGCGTTTCTCATGCCAGTATGTCTGTGTATGATTTATGTTGTAAACAGTGC
AAAGAGCTTTACAGCCATTGTCTCACTAATCTTCAGAGCATCTTTTCGAAATAGAGAGGAGACAAGTGAATCAACATCC
TCTATATCACGGGAGGAAACATATCTCCCTGTGGAGAGATGTCCACTGCTTTATCGACAAGGCACAAAGCTGCGAACAG
AATTCAGGTTGTATTCTGACTCCTACACTAATGCCTATGGACTAGACATGGTGTAAAATTTTATATGCGTGAAACATGA
GGTGTATTCATCAACTGATCACTATTAGCMACTGGCTAGAACATGAAGTGTTTGTTTGTTTTTCAAAAGAAAGATATGA
TGAAACTTTATATGCTTTTACACAGTTCTGATATTTTAACAATTTGACTAATTTTTATAGTTTTATTCCTTCCAGAAAT
TCCTTTAACTGTGCTTATCCCGTAAGTAATTGCTAATGTTCTTAAACTAATCGAGAAAATCATTTCTATTAGTCCCTAA
ATACCCAGACTTCATACCTTCTTGCTTCCCACTCTCCTCATATCTAATCTCTCCCTTAGGTTTAGCAACAAAATGTGCA
GCTTGACRTGGTCAGTGGGTGTCTGAACATTTAGTGCTAGTGTTTCCTCTCATCTCTCTGCTTTTATTTGGACTTCTCA
ACTCTTAAAAGTAATTTTAACATATTATAAGAAATCTTTGAATTTATAACACTTTACAGTTTATGAAAGACTATATAAA
GGTTCCTTCTCACAGGCTGTAAGGGGTACAAGGACAATGAAACTCAGATGACATCCTTAAATGCACTCTACTATTATAT
GGCTAATTTAAGATTAAAAATCTGGTTTCATAATTATTAGTCTAGTGGTCCTTTTATAGGCAGCATAATACAGTTGTAA
GGAGTACAGACTGCCTGTTTTTGAATCACTGGTCCATGCTAACTAGCTGGCTTACCCTTGGGCAAGTTACTTGAGGTTC
TCTGTGCCTCAGTTTCCCCAGCTATCAAATAGATCTAAGAGTTGTGAAAATTCAATGAGTTGATACATATAAAAATACT
TAAAGCAGTGCCTGTCCAACATAAATGCTTAATAAATGTTAGCCCTATTATCTTTCCTCATTATTTAGTGTTAAAGAGC
AAGAACATCTATAAAAATAAAAATCAAATAATCCTTCAAAAATTCCTGAATATTATAAAACTAACATATAATGTCAACT
AAAATTGATACCAATTAGTTTCCTTATCTTGAATGAAATCAGTATTGTAGTCAGAGCCAAGCTACTGACCTGGATTCAC
ATATAACATTCAGTTTCTCTTCTGAAACTCCAGCTCACTTAGCACATTTATGCCAAAAACAACAACAACAACAACAACA
AAAATGTATAAATTGCCTCATTTGTTTGAAGTGTAACACTCAGGTTTTCCATACAGCAGGAAACTCTGATAGAAGTATA
GATTAATAGGCAAGGCATTGCTCCATTCCCTAAAGGCGTAATAAGGCTATTCCACAAATATGTATTGAACTTCTACACA
GGTTTAAGAATTATGAGGAGGAGAGAAGATATTGTAATGAATCCCTACTATTCTGTTTATTTTTTATTTCTTTTTAACT
TTTTAAGTTCAGGGGTACATGTACAGATTTGTTACATAGGTAAACTTGTGTCATGGGGTTTGTAGTACAGATTATTTCA
TCACCCACATATTACACCTAATACCCATTAGTTGATTTTCCTGATCCTCTCACTCCTCCCACCCTCCACCTCTCTGATA
GGTCACAGTGTCTGTTGTTTCCCTCTATGTGTCCATGAGTTGTCATCATTTAGCTCCCACTTACAAGTGAGAACATGCA
GTTCCTGTGTTAGTTTGCTAAGGATATTGGCCTCCAGCTCCATCAGTGTTCCTGGAAAGGACACTATCTCATTCTTTTT
TATGGCTTCATAGTATTCCATGGTGTTTATGTACCACATTTGCTTTATCCTGTCTACTACTGTTGGGCATTTAGGTTGA
TTCTATGTCTTTGCTATTGTTAATGCTGCTGTAATGAACATACACATGCATGTGTCTTTATAATAGAATGATTTATATT
CCTTTGGGCATATACCCAGAAATGAGATTGCTGGGTTGAATGCTAGTTCTGTTTTTAGGTCTTTGAGGAATTGCCACAC

Fig. 9.320

TGTCTTCCACAATGGTTGAACTAATTTACACTCCCATCAACAGTGTATAAGTGTTCCTCTGAGTACCTGTTATTCCTTT
GAAGAAAATACCTACACAACTAGATAATTAGAGAAGGAGAGAAAGAGAAAGAGAGAGAAGGATGGCACAATAATAAAGT
GTTTTTTGGAGGCAAGGATGATGTTTTATGAATTTTTGTATTCCCAGAAAATAACAGATAAGTGGTTATTAGTGAATGA
AGAAATGAATGAGTTAACTAATTGTAGCAGAAAAGGGAAAGATAAATATAAATAAAGGTCATCCATCTATTTAACAAAC
ATGTATTGCATGCCTAGGAATTGTACTTGGCTTGAAGACTTTAAAGTAGATTAAGACAGTCCCAGACTTCAAGGACCAG
CAACTGAGGGTGTTAAACAGAAAGGACAATGACATTACAACAAGCTGTGGGTTCACACATACCATTTCAAGACTAGAGA
AGAGAAGAAAATCAGAGATTCTTCCAGAAATGAAAATTCTTGAGCTGGGGCTTTGAGGATGAGGAGAAGTTAGTTAGTT
AGAAAGGAAAGATGAGTAAGGTTGGGGGTCAATAGTTCGAGCAAATATTGCAGTATGAAAGGTGTGAGAGAGCCTCAAA
CAGGTTACAGATTGTGGCACTATAGGTGATGGGGAAGGAGTGAGAGAGGTAACTACAGAGAAGTAACCTATTAGGAACT
GCTAAGAAATGTTAGATATTATGCTAAAAAGCTTGGAATATTTTTTAAAGCATGGGGGCATCACTTGATGATCTTTCTC
AAGGACAGGACTATTAATCTTAGGGTTTATTATATTCTTCAATTTTGACACAATTTATACTTCAATAATTCTCTGTAAG
AATTTTTTTCCTTTGTGGTCTTATTTATTTATTGAGATAGGGTCTTGCTCTGTCACCCAGGCTGGAGAGCAGTGGCAAT
CATGGCTCATTGCAGCCTTGACCTCCCAGGCTCAAACGATCCTCCTGCCTCAGCCTCCCAAGTAGCTGGGACTATAAGC
ACGCACCACTGTGCCTGGCTAATTTTTAAAAATTTTTGTAGAGACAAGGTCTCCCTATGTTTTCTTGGCTGGTCTCGAA
CTCCTGGTCTCAAGCAATCATCCCACCTCRGCCTCCCAAAGTGCTGGGATGACAGGTGGGAGTCACCACATCTGGCCTT
ATTTTTTTAACGTATTTTTTAAAAACCCAAGAACAGGCATTTTCTGCGTAATGTGCCTGCATTTTGGCTTTGTATTTAC
TAATGCTTGAATTATTGCCTTAGCTATACATAATCAACTGAAGAAAAGTATTTAACTTTTAGCTACAGTGATTTCTCAT
ATGGAAACTGTATACTTCTCAGGGATTGTGGAAATGTCCTTGGAAGTCTATGACCCCTCAAATTTGAGAAATGTTGATG
TGGAGGTAGAATTGGAGTAGGCAGGGGAAAGACAGGTACCAGGAAAACCAGTTCAGAGCCTACTACAATAATCATATGA
GAAACAAAGAGGGCTTGAACTAAGGGAGTTCAGATGAAAGAAGAATCTAATAGTTATTTATAGAGTAAAATAGACAGAA
CTTGGTGACTTCCAGGATTTTAGGCTTGAGAGAGGGAGGACTCAAGAATTGTACATGGGTTTCTGGTTTCAGTGATTAG
ATTTCTGGCATCTGCTGTCCATAAGATAGTAAAAACTGCAGATAGGGTAAATGCCAGTATTGGAAATATGAAGTTTGAG
GTGTCTGTGCACATCCAGATAGAAATTTATGGAATGTGGAAGAGCAATGTAAGCTGGGGTTTTCAGCACAATGGTAGGT
AGGTATTGTAGTTTTGGGGGTGAAGGTACTCACACAGGCAATGAGTAGACTAAAAAAASAAAAATATAGAGAAAGAAGA
ATCCAACAAAGAGATTGAGAAGTAGTGGCTGAGAAGTAGGCAGAAATTTAGGAGAGTGGTGTTCTCAACTCCAAGGTAG
GAGAGAATTCCAAGATTGGAATTGTTAGAAAAATTTGATGGAGAAGGTATTCTTTGAACTGTGTGTGAATAGACAAAGA
GCTCTGACAGAGCAGAAAGGAGGAGGTATGGATTCTGGGTGAGGAAATGTTATAAGCAGTCCCACAAAGAGTGACATCA
GATTTATACAAGAAGCCAGAGCTTGACTGTAGTGGGCAGTACAGCATAGGGTGGAAAGCATAGACTCTGAAACCAACTC
CTTAGGTTCAAATCTCAGCTCTCCACTTTTAGCTATGTGACCCTTGGCAGGTTATGTAACCTTCTAAAGCCTCGATTTT
CTCCTGTGTAAAGTGGAGGCAGTGATAGTACATTGTTAATAGATTGTTTACTTTTTACTCTTCTGTATAGACGGACCCC
TTGCAAAAGTCAGGGTGATTTTATATATACAACATCGTTATCAGCTACCTCTGAATACTTGATTCTTTTCCTTCTACAA
CCCCAACCTCCATTTGAAAAGTTCTCATTATTCTTTTTCTTACCTATTCTAAAAGTATCACTCAGTCCCCACTTCCTCC
AGGGAGCTTTTCTGACGAGTATTCAGCTCTTACTTCTTAGACCTCCAGTAACATCTAATGTTTGTCAAGTACAATTAAG
CACTTGCTTTTACAAAACTAATTGTGGGAGATTATTTCTAATGGTTTCATGTTTTTAATCTTCTATCCCCAAGAAAGA
TTGTAAACTTCTTAAAGTCAAGATACATCTCCAGGGTATCCGCACATTTTGCCGTGCCTGGGACACTCAGTTTATGCCC
ATTGTCCTGATATAGTTTATATGAATTCATAATTTATAGTGTCCACTTTTGACTCTCTCAAGAGGGTAGTTGTTTGCAT
GATAAATTCCATGAACAACCTGGATATAATAATACATACTTTTTGAAATTAGTAACAAATATTTATTGAGTGGCTATAG
CATATCTATTACAAAATAATAATAAGCAAGGGGGAGAAAACGAACTGTCAATAATTATGCCATTGAGAGATAATTTTTC
TGTCTCTGTGTGTGAGAGTGTGTATGTAGAGAGAGAAGGAGTTTTACTAACAACAATGAGATTATACTGAAGGTAATAT
TTTATAATCTGCTTTTAAAATTTCACAGTATATTGCATCATGAACACTTTTCTTACCATTAAATACAATTCTCTATATA
ACATTTTAATGGCATTTCCTTACATGAATATACTACACTTAAGCAATTTTCTATTATTAAATATTTGAAGCTCTCCCCA
GATTTCACATTATAAGCACTATTGTGATGAATATCTTTGTGTAGAGTCTTTATAGCAAGGCTGGGTTGTTTTCTTACTA
TATATTTCTAGAATTAGAATTGTCAAACTAAAGAATTGCCCAATATTTTAAAGATTTATTTTTGCTATTATTGTCATAT
TGCCCTGCAGAAAGTTTATATATACTTCATCAGCAGTCTCTATTTCTACATTATTTCCGTTGCTATATTTTATCATTTT
AATTGTTCTCTTTATTTGATGAATCACATAGTATTTTGTTTTAATAAGAATTAATTTAGCTTCAAGAATATTAAAATCT
GTTTTGTGTGTCTAATGGCAATTATACATATTTGCTTTTTATTATTTTATTATTTATTCGTGGGCTGATTTGTTTTTTC
TTGTTGATTTTATTTTTATTTATTTTTTAGGAGACAGGTGTCTCACTTTGTTGCCCAGGCTGGTCTCAAACTCCTGGAC
TCAAGTGATCTGACTGCCTCTGCCTCTCGAAGTGCTGGGATTACAGGTGTGAGCCACCACCCCTGGCCTCTTATTGATT
TTAGAGTGTTCTTTAGAGATTAAGAATATTAACTTTTCATTTATGTTTGTTTTTTACACTTTTTTGCCATTTATTCATT
TCTATTTTTACTTTTACAGATACTCTATTTTAATAAATAGAAGTTTAAATAGTCCCTATGTAGCCTGTATGTTTATATT
GTTTATATAGTCTCTATATAAATATATTTTATAAATCCTTAGCAATTCTTTTCCAACACCAATATTTTCTTCTAGTATT
TAATCATTTTACATCATATATTTATATCTCTAATAATTATGGAATTTATTTTACTTTATTTCAGGGCTCTGATGTTCTT
TTCCTAGATTTTCTAAATTGTCAGAATCCTAGGTATTACATAATCTATTATTTCCTTATTGGCTTGAAATGCCACTTCT
ACTGTTTATGGTTAGTTCCTTTTTTAATCTTTACATCCTATTTCTAGACAAAAAGCCCCATGTTATAATTATTATGGAT
TTTAAGAAATACATTTTAATATCTGGGAGAACATATTCCCTCTTAATCTTATTTTTTAGAATTTCCTGGGTTATTCTCA
CATCGTTGTGCTAAATTATACAAACAATCTACTTGTCAAGTCCCCCCCAAAAAAACCCATTAAGATTTTGATTGAAATT
GCATTAAGTTGCTTATAAGCAGTTTATAAGTACTACAGAGCTCCTTATGATATCCCTGCCAACTACTTAAGAAACTCCT
AGTTCTTAAATTACAAATATTCCCAGTCAAGAAAGGATCACCAGACATTTGAAAAAAGACAAAAAACCAAACCAAACAA
AAAAACCAGTAGCCTAAACAAAAAGGAACTAATAAATAAACAGGACAAATTTATTTTCCTGAGACAATTTATCTTCTGC
TTTCCAGAAGAAACAGAGACAATGAAAAGTGTGGGAAAAAATTTGTCAATATTAAATTTTCAGAGATATTCAGGGGGAGA
ATATAACCATTAAGTATGATCTGATTTCCATAAATAGCAGAATACTGAATATATATGTATATATAAAGATTGGATAAAA

Fig. 9.321

TGCAATTCAAGTAATATTCATTCTTGAATATTGAATTAAGCAAATATCTTAGAATATAGAGCAAAAAGCCAAGGATATA
AAATATGATGGAAAAGTAAAAAAGATATGAAGAATGTGGTAGAAGTGGAGGAATGGGAAAGGATGTGGGAAAATAACAG
AAAAAAAATCCTTGACCTGAAGAGTAATTCAAGTCCTCAGATTGAAAAGTTTCATCCAACACCGAACAAGGAAAAAAGG
ATACATATCTAGATGTGTATACACATGCTGATGAAAATTTTGGAATTCTAAGTATAAGAAATTAATCCTTCCAGAGAAC
AAAAAAAAAGGATCTTTCAAAGGTATCAAACTTCTCATCAGCAAGATTAGAAGTGAATGCAGACTAGGCAAGGTTTCAA
AGTTCTCAGGAAGAAGAACTAGAACCCAAAATTGATAGTCAAACTATCAAGTGTTAAGACAAACTAAAGATGTATTTAA
ACATGGAAGGACTCAAGTTTACAACTTTACCTCCTACAGATTCTTCCTAATTAAAAGGAAGTATTACTCGAAGATATAT
TCAAGCAAAACAAAGCAACGGGAATCCTATACAGAAAACCTAGGATACAAAGAGCATTGGAACCAACCCAGATGTTTAT
GAAAATAAATCCCAGTATGACAACTGTGTAGTAGTAGGCCTAGAAAGCAGGCAGCCTAAGTTAGAGTCATCAGAAGGTT
CCAGGAAAAATGCTTTCAAGAAGAAAGTAGACATCACATTTCGAATTGCATAATTAAGAGCCTTTTAACATTTTAGGGC
AAAAGTAACTGCATTTAACTCATAGATTAATCTAAGACTTGATATCTTTATAATATTGACTCTTCCCATGTAGGAAACT
AGATATATTCTTCAAGTTTTTAAAAATGTCCTTCAGTGATGTTTTGCAATAATATTTATACAAGAGTTTTACATTTTTC
GTTGTTTATTTATACATATTTGATATGTTTTATTACTATTATGAATAGGATCATTTATCTATTTTCTAACTGGTATATA
GAAAAAAACCTGTTGTGGATACATGCTTTATAATGTTTGACCTTTCTTATAAATCATAATGGTCTACCTTTTTTATACC
TTTCAGTTGATTCTCCTGAATTTTGAGTTACAGAATTTTTATCTTAAAATAGAATGATTTCCTTCTCTCTTAAAAATAT
TTGTACAGCATATTTGGTTTTCTTGTTTGGTTGCTTACGTTAGAATTTTCTGAGCAACATTCAGTAATAGTGGAGACAG
CTTCTTTTTGTTTCTGATTTCATTGTTAATTATAGATGTCGAAGAAAAGCTATTCATTACCATGAAAAGGAACTATTCT
ATTCTTATTGTACTGAGAGTGCTATTTTACTATCAACTCTTTAATAAGTGTGATATACTACTGTATTAGGCCATTCTCA
TGCTGCTGTGAAGAAATACCCTAGACTGGGTAATTTATAAAGAAAAGAGGTTTAATTGACTCACAGTTCTGCATGGCTG
GGGAGACCTCAGGAAACTTATAATCATGGCAGAATGCACCTCTTTACAGGGCAGCAGGAGAGAGTAAGCACCAGCAGGG
AAAATTCCAGAAGCTTATATAACCATCAGATCTTGTGAAACTCATTCATTATCATGAGAACAGCATGGGGGAAACTGCC
CTATGATTCAATTATCTTCACCCAGTCCCTCCCGCAACACATGGGGATTATGGGGATTACAATTCAAGATGAGATTTTG
GTTAGGGCATGGCCAAACCATATAATCTACATTAAGGACATTGTTAAGTGGCAGGATAAATGGTGTGGGCTCAACTTTA
TACTATAGAGGACCATTATAGCAATATCATAAAAGTAATACTTTGAGAGACTAAGCCAATAATAGGACAAATATAAATT
TGAGGAAAAGATATACAAAACCATTTAGTAATTCAAGCATCTAGTGATAATTGTATAACCATATGGACAAAGGTAGAGA
AAAATACCTATAGAAAGTTTGAACTTAAGAGATAGGTCAGGTAACAAACCCACTTTTTTTCTTTTTTTTTTTACCTGA
TTACTTCCTGGTCATGAGGTTCAAAATATTTGATAGCAAAATGATTTAAAGTCCAAATTAATATTGAATTGAATATACA
CATTACAGCCAAAACCAGACCTATTTTTCTGTTGCTTATCATATATAATTATAGAAAGCATAACTGAACAACAGGAAGT
TATTACTTCTTAAATATCAGAAAACATTTGACTTTCTCTTCTGAAATAAGGAACGGCAGTAACCGAATTCTAGTTACTG
CTCTTAATAGTTTTGTAGTTCTCATAAAATATTGCTTATATATTATTTGGCTCCCACACTATCCATTTTGATGGTTTTA
AATTTTTCAAATAAAAATAAATGAGTTTTCATACTATGGATGACTTGACATCAGTTAAAAGTGTAAATTCATACTTGAA
GATAGCAGGACTCTATGCTCTTTCCTCATTGTTCTGGTCAAATACATTTCCAATCATGATAATCAATAATGTGACTATT
AATTTTTACTTGAAGTTAATCTATTCATGTTTGATTAGAAGTGTCTAAAACATAAACTTGGGATGTCAATGAAGAACTT
TTTAAAATTCTCCTCCACAATGGCTGATAATCAGGCCATGATTATATTTTGAAGATTTTACCTAGTTAGTCATATTTGG
GGTAAGAATATATGCTATCTCCTTCATATTAATAGTTCAGATCTTTAATTATAACATGTTTCATGGTCTATAAGATTAA
ATTGAACATTAGGAAAGCTTAGCATTTCTCATTTGTGAGTCTTACATTCACACCTGTCAGGATTGGTACAGATTCAAGC
TTGTTTTTAATAAACTTCAAAGAAGATCAAAACTAGGGATCATCTGTTTCATGTCTTTGACGTGATAGAAGTTTGGGGC
CCCCGTTTTGCCCTGTAGCTTTTGCCTAAGGAGAAAGCCACCCTTTTCAGCTGATACTTGCTCCCACAGGTTTTTCACA
GTTTTTGAGTAGCGAGTGGCAAGAAGCAATATGACGATGTTGGTAGGTAGAGAGATACTTCTTCACCATCTGGTGAGCA
TTCTGGAGAACAGAGACAAGTCCCACACTGTTAAAGGAGTGAAGTCATTTTGCAGCCAGTTTTAAGGATTGATTTAAGA
ACTCTAGGAGCAGGCCATTATGTAGTCATCCATTCAGCACGATTCTTCGTGGGACTGTTTACACTAGAAGGAACTGTAG
TGATCAATTTAGCGTTGAGGAAACTGAGGGCTACAGAGTGCCAGGGTCACGTTCATCACACTTATTTGTGTTTCAAAGC
AGAATCCACACTCCAAAATGTGCAACTACTGTCTTACTATGGAATTTACACTGACACATTCTGAGGTCATGCAGGAAAT
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CACAGACTGGGATTGGGAACATGGGAAACGTGTGTGTGTACAGACACAGCAACCCTTTTCTATGTGTCATGTCTTCAGC
TGAGTTTTAAGTTGTACTAGTGGAAGCCATAGCCTATGTTGGCTCATAGGTCCTAGTGCCCTTTCCCCTTCCCTTGCCT
CTGCCCCTGCCCCTTTCCTTGCCTTGCCCCTGCCCCTGCCCATTCCCCTTCTCCTCTCCTCTCCTCTCCTCTCCTCTCC
TCTCCCCTCCTCTCCCCTCCTTTCCTTTCCTTTCCTTGACACTGGGTAGAGTGTAATGCAATCATAGCTTACTGCAGCC
TTGAACTTCCAGGGCTCAACCAGTCCTCCTGCCTCAGCCTCTGGGTAGCAAGGACAATAGGCACACACCATTATGCCCA
GCTTATTATTATTATTATTATTATTATTAATTTTGTAGAGATGGGTCCTGCTATGTTGCCCAGGCTGGTCTCAAACTCC
TGGCCTCAAGCAATTCTCTGGCCTCAGTCATGCAAAGTGTAGGGATTACAGGCATGAGCCATCTCTTCCAGCTCTAGTG
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GTTATGTTTTCAAAAATGCACTGTGTGCATATGTGTGTAGAAATGTATTAGAATGAAATAACATTTTTTTACAGTGGCT
ACCATTGGTTTGTGAAATTATGCATGCTTTTTTCTTAATTTTCTCTAATTTTTCTCTATTTCCTAAGATTTCTACCATGA
GATTTTTCTCTTAATGTCTAGTTTTATTACATAGGTAATAGATAAATATATTCATGTCATAAAATATTTTTAAAATTCA
GAATATGAGAAAGTCCTTTTTCATGCTCCTTAGTCTTGCTGTCTTTCTTGAAAGTATCCACTTAGTGATGGATACAATA
TGGTGTATATCTGCCTTAATCCATTTTGTGCTGCTCTAACAGAATACTTGAGACTAGGTAATTTATCATGAGCTGAAAT
TTATTGGCTCACAGTTCTGGAGGCTGGGAAATCTAAAATCAAGGTGCTGGCATCTGTTAAGGGTCCTTTTGTTGCATCA
CCACATGGCAGAAAGCAAAAGGGAGAGAGATAGACAGATTGGGAGAGAGAGAGGAAAGGGGACCAAACGTCTCACTCTT
TTATAACAAACCTGCTCCAGTGATAACAGGATTAACCCTTACATCAGGGCAAAGCTCACATGACCTAACACCTCTTAGA
AGTCCCAACTCTTGCTGGATGTGGTGGCTCACACCTGTAATCTCAGCACTTTGGGAGGCTGAGGTGGGTGGATCACTTG

Fig. 9.322

AGGTAAGGAGTTCGAGACCAACCTGCCTGAGCAACATGAAGAAACCCTATCAATACAAAAAAATACAACAAAATAGCTG
GGCATGGTGGCATGTGCCTGTAGTTCCAGCTACTCTGGAAGCTGAGGTGGGAGAATCACCTGAGCTTGGGAAGCTGAGG
CCACAGTGAGCTATGATCATGCCACTGCACTCTAACCTGGGTGTTGAAGTGAGACCCTGTCACCAAAAAAAAAAAAAAA
AGAGTCCTACCTCTTAATACTGTTACAATGGCAATTAAACTTCAGCCTGAGTTTTGGATGGAACAAACATTCAAACCAT
AGCAGTATCTTTTCAGAATTTTTAACTGAATATTTATATATATGAACATTTAGAATTAGGGGTAATTTTTAAAAATCAA
AAGTGATATACTACAGATGTTATTYTGTGATTGATCTTTGCACTTACTATGTTTTGGAGATTATTTTATTTTAGTACGT
ATAAATCTATACCAGTTTTCTTAAATTGCAGCATAGTATGTATATCAAGTTTATCCTTTAACTATTTTCTTACTGATGG
CCTTTTTTAATATTGCAAACCATACTACACTAAACATTGTCGTGCATACTTCCTTGTGTATTACATTGGTTTTTAAATC
AATGAACTAGTTGTAAACATGGAGAGAAACAACAAGGAGGGAGATGGATATAAGAGAAGAAGAGATTAAAGGGGATGGA
ATCAGTTGTTTCTGGAGCACAGAATATTCACCAAATTTGACCAGATGCGCGGTTGCTCATTTAGGAAAGAGCAACTGCA
CTGGGATGAAGAGGTTTTTTAGGAAATCAGAGGTCTTCAGAGAAGTTTTGGTTAAAATCTGCAGTATACACTACCAAAA
TGGTTTTTGTCTTTGTTGTTCTTATGCAAGAAAGACTAGCTCTTTTTATCTAGAGCTGGAAGGTTGCTGTCTTGGAGTG
GGGGAGAAAGGAGACAAGTATCTGATGGGTGGGAATGGAAGGTGTGTATCCTTGCAGCAGACCTCCAGAGTAGCTGACT
GACTGATATGCATGGTAGTCCTAAGATGTGTTTGAGAAAAGAAAATATTAGGAGCTCTTGACAAATCTTGAAAATCAAT
ACAAAAATTAGCCAGGCGTGGTGGCGTGTGCCTGCAGTCCCAGCTACTCAGGGGGCTGATGCAGAGAATCCCTAGAACC
TGAGAGGCAGAGGTTGCAGCGAGATCGCACCACTGCACTCCAGTCTGGGCAACAGAGTGAGACTCTGTCTCAAAAAAAA
AAAAAAAAGAAGAAAAAAAAAATCAGTTGCCCATCCTGCAGATATACAGTATAGTGTAACTGCTTCAGCCGCTTGCAAA
TCTCTTTTACAATTCAAAACAAATTATGGAGAAATAAGAGTGAAATATTTTCCTGGAAAAATAATGTGAAAAATTGAAG
TTTTAAATATCATAGTTAAATTGAATGTACCTTAGGGACAACTCCTTTATTTAAAACTCCAATTCTCCAATAACACACC
TAATATTTGTTATTTTGTTGTTAAATATTTACTCTATGTAGACATTATGCTAAGAGTATAATGCCTTTTTAATATTCAG
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CTGCAAAGAAACTTATTTAGTAGATAACAAGTTATATCCATATATTTTTAGATATCAATATATATGTTGTGGATCGGTA
GCTTGGGGCACATTACTGCTTTGAATTGTGGTATCTTTTATTAGATATTGAAATACTGGATTATTGATAAGACCATGTA
GCAGTGAGAAAAATAGTTTTTGCTTTGATTTGTGTCAGTTATACTATGTTGTTGGAGCTTTTGAAGTAGGGAGTGATCA
GGTAGAGACAGGCAGAAGAGATTAGTTTGTATGTGTTATCCTGAAATCTGAGTTATTTGACATTTTTAAGGCAAGGCAT
TGATTGAGTTTTATGAAGATAAATTGGCAAAGAAAAGTAATCCCATCTGCTCAATAACAATTCTTTGCTTTTAGCCAAG
AAAATTGATTTCAACTTGAGAGTAATAATCATATTTATCACACTTGTTAATTGCATGAACTGTATACAAATTGTCAGGC
TTATTAAGGTAGATATTTACGGTCACTGGGCGTTCCTCACATTCCACATTTTCATTGTTATGGCATTAACTATTTTTTC
TGTTTCTCTCTTTGTCACTGAAGACTTCACGTAGTATAATAGCCAGTATTTTCTGTGATTATATAGCAATATTCTCAAA
CCTAATTGTTCATACAAAGTACAAATCAGGGACTTTTTCTACTAGGTTCTGAAGTACTTGTTCTCTAGATTTAAACTCC
AGTGTTGTACTAATGGGAGTAAGTTTTTCTTTTATCTGCCAAGGAGCTCCTCTTACATGTAAAAAACTGTTGTTTTTCC
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GATAAAATTAATAAGTAAGTTATAAGGAATATTTAGAAAAATAAAAACAGTATTCTAAAAGACAATACTTATATCTTTC
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TCCATATTATAAGAAGTCTTTTCTTCATATGTACCCAATTCCAAATAAGTGGATGCTGGAAGAAAATCTGTAATTTATT
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TTTTTTTTGCAACAAATGTGCATACCAATGATTTGAAGTATTTAAAAGAAACTTTTCTACTTGAAAGGAACCAAGATGA
CTAAGTACTAATTTTGCGGAATCTCCAATTGGGAGGATATCTACTGCTCAGAAAAGCAAACTAAAACAAGACAAGAAAT
TAAAATTGACAAAGGAGAAGTTCCATATAATCTAATTCAAAATCAAATGAGTTTTTCAAAGAAATAAGTTTCATCATGT
AATCTAAGCCAAAATGAGCTGAAAATTTACACACAATTTCTTTTCTTTTTCTTTTTCTCTATTTCCCATTAGGTGGTTT
CCATCCATGGAAACTAGTTACATGGCATTCCTACCATCCCATGCCCATGGTAGACATAATTAAGAAATTGTGTGTGTGT
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTTTGTAAGCTTTTTACTCCTTCTCAACAAAGCATTTCAAGG
AGCCAACAGCAAATTAGAATTGAAACTCCATTATGTCTCTCAGGTCTTCTGATCAGCTCTTATTATACTTACTCTTAGT
AAAATAATCTCTATTAATAGTGAGAAGTAAGGAACTATATGATATAATAAAAAGTGCTCTAAAGGAAGTCAGAACATTG
TGTGGAAGTCCTGGTTCCACCATTAATGGTAAACTCTTTGAGGACTTCCAATTTCTCCAGGACTGGTTTTCAATCTGTA
TAATTAAGGGGTTTAGGCTAGACTCTCTTTTTATTTTTTGAAACAGTGTCTCACTCTGTCACCCAGGCTGGAATGAAGT
GGTACGATCTTGGCTCACTACAACCTCTGCCTCCCTAGGTTGAAGCAATCCTTCCACCTCAGCCACCTAAGTAGCTGGG
ATTACAGGCATGCACCACCACGCCTAGTTATGTTTTCGTATTTAGTAGAGATGAGGTTTCACCATGTTGGCCAGGCTG
GTCTGGAACTCCTGGCCTCAAGCAATCTGCCTGCCTCGGCCTCCCAAAGTGCTAGGATTACAGGTGTGAGCCACCACAC
CTGGCCTAGACGCTTTCTAAAATTCTTTTCAGTTTCAACCTTCTATGGCTTTTGGATTCTTTTATTTCTTATACTTTCA
TATTACTGAATCTCATAACTCACTTTTTCCTCCATTTTATATTTCAACTTTTCTAGTCTAGGGCTCTGCACAAGTTAT
TACTCTGCCCTTTTATTACTACTCCAAGGTAATTCATGTTATATGTAGATGTATATTAGCCATGACAATAAATCTACAT
ACTGTATTATCATCTTTCCAGAATTTTTCAAAACAGAAAGTCTTTCTTGACTAATCATTTATTCCCCATATAATAGTAT
GAAGTTATTAACAAACGTTCCTTGAATTATGTGTGACAGAATTTGCTGGGAGCTTGAATCAGTATATTTGTTTAGGCTG
CATATAACAGAAGGCTTCATTTAAAATAGCTTAAATAATAAGAGATTTATTGAATTATATAATAAGAAGGTAGTGATAG
AATGATTCTAGTAGTACAAACATGCATCAAGAATCCAGATTCTTTCCTTCTTTCTAGTCACCCATCCTCAGCACAGTAG

Fig. 9.323

TTTTTGATCTCAGTTTTATCCTCTTATGGTCTCAAGATGACTACAGCAGCTCTAAGTATATTTATACAACTTCCTTTTC
TTCTGTCACTTTTTAAGAAAGATAAAAACTTTACCAGAAGTTCCTTAACAGATTTCTTTCTCAGATCTGTATTAGAAAC
AAATTCATCATATGCTTATATCTAAGCCATTCATTGGCAAGAGAAATGCTATGAAATTGGCTGGGAAGTAATCATGGTT
CATCCTGGTCCTGGGAGGGGCCTGATCTCCCTTGAAGCACCAACCGCCTGACACCTGAACAAATTCTAGTGGCTGCTGG
GTAGGGAACAACAGTGTCTTTACAAGTTGGTGCATTATAAATACATTTCCATAATTTGAATCAAGCCTACCATCTCCTC
CTCATCTCCAACCACCCGCCCCCCCCRCCCCCCACTTTATTTCTGTATCTTCAGCAACTTCCAGAAACTTCTCATTCT
TCCTTAAATACACATTTTTGTACCTGCCATATTTTGCATGCCCTCTTTTATCAGCCTGGAATGCACTTTGTCACCTTTG
CAGCCTGGTAAAACCATCATTGTGCTCATATTTCAAGAACCACCTCAAATGTCTGCTCTTTAGATCTGAACCCTTCCTG
AATTCCCCAGCTTAGCAGGTCAAGTGAGTTGTTCTCAGCTTTGTACTTCTGCTATAGATCAGCCCTCATCATTTTATAA
CTATGTATTGACCCATTTACTCCTGAGAATCCTGTAAGGATGGGACTCAGTTCCTTGGTATTTTGTTCTCAGAGAGATG
ATGCTTCATACTTACCAACTGTTCAATAAAGTTTGTTGAATTAATATAGTTAAAAGCAGATACCTTTCTGTTATAAGTT
CAAAGCCTAGTGATTGAAGATTTTTCTTTACATTATTTAAATGTATTTATTTTGGTAAAATATTTAGAGCAAGTTTCAT
TCCATCTGTTCCATCTAAGCGATTCATGACCTGCATACATTCTAAATGACAGGAACCACAAGCAACTCAGTCAGCAGGC
TTCAGAATCGGTCATCCTAAAAGATATTGCAGGTCAATGGCTAATACACTAACAAAGAAAGAGCTTATGCAAATAAGTA
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GAATAGTAAAACAGAAAACAAAAAAACAACATGAAGACCTCTGATTACATCTATAGTAATTAACATATCCATTTAACTC
CTCTGCCTTCAGAAAACCATCAATGGATGTTTATAGGYATAAATGACAAGGACAAAGAAAGTGGGAAGGGAGATAACAG
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GGGGCCTARGCAGGTTGAAGACTGAGTGCCATTCTGAAAACAGAGGGATTAAATAAACACTTATATATTTGTGTTCATG
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AATATTTGTTGAATGAATTCCGAAGRTTGAAAGTCCCAACCTTCTTCCCCTAGTCAGCTTCCAACTATGCTTAAGCCTT
CTGGACAGGAGATTGATATAACCTTTGGAGAATTCACCAACCCAAGAGAAAAAACCCAAAGATAATGGTGCAAGGTATT
TCTGAATGAAACTGTTCAGTTGGATCATCAAAAAGTGGATGTAGTTGACAAATCTTACCTATGCAAACAGAGCTTCCAA
TCTGATTTTTAGTACTCTAGCCTTAAATATGAGTAGACAGATAAGATTTATCAAATACTTAGAAAAAGTAAGTGAAAGA
AACCAAAACAAATGGAAAAAGACCAACTTCAAAGTACAGATGTTGGCCGGGCGCGGTGGCTCACGCCTGTAATCCCAAC
ACTTCGGGAGGCCAAGGCGGGGGGATTACCTTAGGTCAGGAGTTCGAGACCAGCCTGGCCAATATGGTGAAACCCCGTC
TCTACTAAAAATATAAAAAAATTAGCTGGGCGTGGTAGTAGGCAACTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGG
AGAATTGCTTGAACCCAGGAGATGGAGGTTGCAGTGAGCCAACATGGTCCCACTGCACTCCAGCCTGGGTGACAGAGTG
AGACTCCATCTCAAAAAAAAAAAAAAAAAAAAAAAAGAAGAGAAATAAAAAAGTACAGATGTTGCAGGAAGAAGGTATCAT
CAGAGAGAGGAGAAGAAATACACTTGATATTGTATTCATAAATATTAACATTGCTTCCACGAAACAAAAGCAGATGCTA
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ACTTGTGACTTGTTCTAAGGATCATTATCGTATCGTATAGAAGGATCAAAAATCAAAAGGGCATCAGACTTCTGAAGAT
TCGTTTTGAAACCTAGAAAAGAATGAAGTGATGCCTTTTAAATTCCGAAGGAAAGTGATTCTCAACCAAGAATTCTATA
CTCAACCAAACTATTGATCAAGAGTGAGCATGGAATAAAGATTATTTCTGAGGTGCGAGCCTTTAAAAAATGTATCTCT
GATGCATACTGACTCAGGAAGCTACTGGAAAACGTGCTCACCAAAACAAGGGAATAAACTCTAAAAACATTACCCTTGG
GATAATAAGGAAAGAACATCCCAAAGTGACAGCTGAGCAAGAGACATGGAGAATAACCAATCCAGGTCAAAGAGGCCTC
TGGATGAGATTTCTTCAAGAAGATGAATTTAATAAAATTCTTGATGTGTTTGAGCCATACTTAGATTTTTGTAATATGG
GAAAAGTTTGGGATTGAATTAGTGATAAGTATATATGGACATCTAAGGGAACAAAGAAACTAACAAAAGACAAGAATTT
TCAAGAAGGAAAACAAAGAAAAAAAGGTAATCAGGGTATGTTACATAGTTTAGCTGCTTATAGTTTTTCTTTGGTTCTG
CTCATGGAAACACAATGACTATCAATCTAAGTAAGACTATAATATATTAGAAGGATGGGTGATGAGAAGTGTGAAGTGT
TGCAAAGGTAAATCCTTATCTTCCGCTATGAAGTATCAATAAGCAATGCCCAAAAAAATGAACTATTAAGAAGTAACTG
TAAAGTTATATCATTTAGAGATAGAGTGGAGTATAGCAAATGAATCAGCTAAAATATTTGAAAATGGGTACCCTCTGGG
GAGTGGAAGATACATGTATGTATTGTGGGTGGGGATGCACTGCAGGAGATCTCTTTTTTTAATCCTTGTGGTACTACT
TAGTTCTCTAAACTATTTGCATCTATAACTTTGCTAAAAATAACATTTAAATTTAAAAATTGATCACTCTTGTAATAAG
TTCAAATTGAAACAAGGAGATAACATAGTTGCTAAGTTTTATTTTTGGACATATTTATAACATTGTATATGTGTTAGTG
AGAATACCATGTAACATCACTCTCAAGCAGTACTTCTAAAAGTAGAAATTGCTGTAATATTTCTCAAAAACTATCTGGC
AATACACATTAAGAGGTATAAAAATGTTTATTCCTTCTGACTTAGTACTTCTGCTTCAGAAATCTCTTACAGTGATCTA
CCTTCTAGAAAGACTGGAGATAAATACATCAAAATGTTCACAGTAGTTGTCTCTGAGTGGTAGAATTATGGGTAAAAAA
AAGATGGCTTGTTTCCATTTTTCTTTTGCACCCCTCTGCATTTTTTCCAAATAATCTATAATGAAGACAGGCTCCTTTT
ATATTTGGAAATAATTTCCAAATATAAACATTTTAATTTTATAACATTTTAAATTTTTCAAAACACTGGTCCTCATAAC
AAGAAAAGTTATTTGTTGCAACCACAGTAGACCAGGTTAATGGTGCCAAGAGTGGAATGCGGATAAAGGCTGACAAGGC
CATCTGGAACTGTGAGTCATTCAGAGCATCACAGAAGAGAGATTTTCTGCAAGTACTAGCTGTGTTGACTGTGACTGCT
GTTTTCCTGGTTGCTCAGGAATCACCCAGGGAAGGAGAGGGCTTCCCCACGGGATTAGGGAAAAAAAAAAAAAAGCTTC
TTGTTCCATAAGAGAGTCTACAGATAGGATGAGTAATAAGGGATAGATTTTACTAAGGTAGAACAAAATGTTAGGACGC
TGGTACGAGCACCACTGAAATATCCCTATATCAAGTTTTAGTCTTTTCATTGCATCTTCTGAACCTGCTGGAGATGCTT
TCACATGGAACGTATTTGCTATAAACTTTTCTTTATCTTTTGTTCAATGCTGTGAAGTTTGCTAATCTTAATGAACCAA
GTCTCTTCATGCTGACAACTCATTGTAAAAGAGGTAAAACTGTGTTTCCATGGTATGGGGAATGGAGAGGTATAAGGAG
GAAGATGGATTTAAATTGATTTTTGGAATGCTTGCTTTATTTTATCAGTTAAAGAAAAGGTCTAACGGATTATTTAGAT

Fig. 9.324

AACTTTAGGCTCCAACTGCACTGATCTGTTTGTCATTCCTTTAAGAAACCATTTTGATTCTGACTACTTGAATTTGCAC
ATTTTGTTCCTTCTCTCTGGAATACCCTAACAAATTCTTTCTGCCTGATAAACTACTTACTCTTCCAGGTCAAGTTGAA
ATGTTCCCTTCAGTGTGAAAACTTTCATGACTCAAAAAATAACAATTATAATAATTACAATTTGATGAGCTACCTGGCT
GTTTACCTAATTCTCACACCATTAGATGAGCGAGGTAGTTTTAGGCTAACTTTAAAAAGGAGGAAACTGAGACTTACAA
GACTTGGGTATGTGGCCCAAGAGTACATAGCTAGATTTGAAACCCAAGTCCAAACCCAGGACTTCCTGCTTAAAGCCCC
TTCTTTTTCAAAAACTACATTACCTATTGATTATTTTGCTTTACATGTGCTTACATGTTGATCTTCCTCAGTGGACTGC
CTTCATTCCTTAATAGGAAATAAATTGTCTTTTTTGGAGGTGTTACATTTTTGCATATAACATTAATAAGATTAAAATT
TTCATTTGTTGTTGACATTCTTTGCTTGACTCTACACTCCACGGGATAGGATCCTTGGGCATAGAAACCACGAATGCTT
TGCTCATCACTGAATCCAGCATCTGTCAGTGTCTGCCATATAGGAATTGCTCAATATACATTTTTGAGTAAATAACTGA
ACTAACAAATGAGTGAACAAAAGAACAAATGAATAAAAAACCTCAGATCTAGCCCCTAACAAAAAATACTTAAAAAAAA
GTTTAGTGTCTCAATTGTCTGTATAGACAATGATTTCACAAGTTCACGTGAAATACACTACCAATATCAACAATCATG
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CAATATTTTACCTACTTAATKAATACATGTGTTTATTTGATAACTAAAAAGTTTATAAAGTCTAGAAATAAAGAAAAGT
CCATGTCCTTTTTCTTTTTTGTTTTCTTTTAAATGAAAACTCATGAGAAATAAGAGGGCAGAATGCATTAAATTATTTC
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AATATAAATAAGGCAGGAAATTGGGTGAAATCAGTTTTTCCTCTAATCTTACATGGAAAAAAATTTGTCATTTGGCAAA
CCCATATGAATCCGATCTGTTTGGTTTATTCATCCATGCAGTGACATTCAGACTCCAAAAACTGTATCAGAAACCTAGT
CAATATTTAAATGCCATCATATAGATTAGAAATGGAATAAGGTATAGGTAACTTACTGCATTTCAAAAAAAGTACTAAT
TGAAACATATTGTCAAACATATATCTTTTTCTCTCTTTAGAAACCTATGGCTATTTTCTGTCTTTCAGCKCACGCTACA
GAAAGGCCTATTTTTCCTTCTGTCTTAGTCCATTCAAGCTGCTGTAACAAAATATCATAGCCAGGCACAGTGGCTCATG
CCTGTAATCCCAGCACTTTGGGAGGCCGAGGTGGGCAGATCACTTGAAGTCAGGAGTTTCAGACCAGCCTGGGCAACAT
GATGAAACCTAATCTCTACTAAAAATACAAAAAAATCAGCCAAATGTGGTCACAAGCACCTGTAATCCCAGCAACTCAG
GAGGCTAAGGCACTAGAATCACTTGCACCTGGGAAGGAGAGGGTGCAGTGATCTGAGATCATGGCACTGAAATCCAGCC
CGAGTGACAGAGCAAAACTCTCTCTCTAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATAAATCACG
AGCTGGGTGGCTTATAAACAACATAAATTTATTTCTCACAGTTCTGGAGACTAGAATGTCCAAGGTCAAGGCACGGTAG
ACTTGGTATTTTGTGAGGGCTCATTTCCTGGGTCATAGATACGTGCCTCTGGCTTTGTCCTCACATGGTGGAAGGGGCA
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CACATAAGGACATGACCAACTTCCTTTGCTAGTCATCCATCTCTCATAATCCTCTCCAGCCCATCTCTGCAGCCTCATC
TCCACCCACACATGCATTCTGCTGTAACAAATGGTGGGCAGGCTTCCAAATGTACTGTGTTCCCATGAAGTTGCACCTT
TGCTGATGTTATTCTCTTTGCCTGGGTCCCCTCCCCATCTATTCACTCCTTTCTGCACTTCACCCTTGCTCTTCTTGTG
CCCTAATAGCTCCTCCTTTTGTGACACATCAAAAATTGCCCACTGTAGGAAGCCCCTCCAAGACTAAGAGTGCCTCTCT
CTGTGTTCCTGCATGTGCTTTTGGAGCCCTTATCACACAGTTGCTCTAGAATTGTTAGCTTGACCACACTGTGAGTTTT
CTTAAGGGCAGGGACTTATTCCTCTTTGCATATCTGGAATCTTACCCAGTGTTTAGTACATACTACATGTTCAATAAAT
ATTTGTTCAATGAATCAATGAATTGATAGGTTTTCTTTTAGTAGAAGGAATAAGGTACATTTTTTTAGAACAGCATCC
GAAAAGCAAGCAGGAAAAATTGGGACATCTTTGCTTAAGGTAAAAATGCTTTTATGGGGACCACCTTTGAAACTCCATC
TACTTGGATCCTTTTAGTCTTCTTTATGAGATAGGAATATTAATTCTTAGATCCAATTAAAGAAGGTCTAGTTACCAAG
GAACAAAACAAATTGGTATAGAATGGACTTTCTTATAAGAGAGTCCCAAATCATAGATCATAAGGACAATCTTATGTTG
AAATGTCTCAATAACTTCCAAATGCCGATGTGAATGATATCATCAAACAGTGTGAGTCAAAGGAAGAAATGGGATTCCT
AAGTTTTCATTGTACTCCTTGACTATTTTATTGGTGTACAGTCTCTTGACAATTATTTTCTCATCTTCTTTCCCAAGGA
AACTTTAGATTTAATATGTTTATTCTGCAAGATGTTTGGAGACAGGTATACACCCTAAAACCACCATTACAATCAATGC
CATAAACTTATTCATTGCCTCCAAAAGTTTCCTCCCATCTTTTTGGGTTTTTTTGTTTTGTTTTCCTTTCATGGTAAGG
ACACTTAATATAACAGCTACCCTTTTACCAAATTTCTAAGTATACAATATAGTATTGTTGATTGTATACTTATGTTATA
CAGCAGCTTTCCAGAACTTATTTTGCAAGACTAAAACTTTGTAACCCTTGACCACATCTACCAATTCCCATCTTCCCCC
AGCCTCTGGCAACTACCATTCTACTTTCTGCTTCCATCAGTTTGACTATTTTGGATTATACATGTAAGTGAGATCATGC
AGTATTTGTCCTTCTGTGTCTGGTTTATTCCACTTAGCATGATGTCCTCCAGTTCCATCCAACTTGTTGTAAATGACAG
GATTTCCTTCCTTTTTTAGGGCTGAATAATATTTCATTGTATATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG
TGTGTGTGTGTGTGTGTGTGTGTATATATATATCACATTTCCTTTGTCCATTCATCTGTTGATGGACATTTAGGTTGCCTC
TGTATCTTAGCTATTACAAATATGCTGCAGTGAAAATATCTCTTTAAGATCCAGATTTCAGTTCTTTTGGATATATACC
AAGAAGTGGGACTGCTGGATCAAGTTACTTCCTGTTTCGAAAGTAGGGCACCCCTCTGGACATTTCTACAACTGAAGTGA
TTGATTCTTACTTTTGGAAGTCAGGCTATTTGTTGGAATGGTGGGGAAAAAAGCTAGAGCTTAAAAATAAATCTAAAGT
TGGAGAGGGGATTATTACTGATGGATGCATTAATTCAAGGGTTACTGATACTCTAAATACATTTTTAAAAGTTGTTTGA
TTAACAAGTCAAAACAGATGGTTTAATGACATTTTAGAGAGGTTTAATAGAGATCCAACTGAATTAACAAATCACCATG
GTGTGCAGAATATTGAAAATTCACCACTAGTAGATTTATGGCATATTTCTGGGTATTTCATTCCCATTTGGTTTATTAT
GATAAATCACTGGGAAACGGGTAGCCTGTAGGACATGACAGCAAACCACACTTTGGCAGGACCAGCATCAGGGCTGCGT
GCTTTTTTAGGAGGCTATGTAGTCTAGCTAGCACAGAGTGACCCAGTGAGAGCTTGGTTGGCTAGGACTTTCTGGTGGT
AGCCCACAGAGCTCACCTGAAAGAGTACCAAGGATGAAAATATCATCTTGGCTAATTGGTCTGCTAGTTGATTTAAAAA

Fig. 9.325

ATAAACAATAAAAAAAATTTCCAGTGTATTTTAGCAAAGTTTAATATTTTGAAGGGGGCAGAAATGTAGCATATTTTGG
GATCTTAAATCTGAATTTGTGTCTTTTTCCAGACTTTGTCAGTGTCTTTGTCTCTCTCTCCCTCTGCCCCCTCCATGTC
TCCCTCCTTCCCTCCCTCCTTCTCTCTTTCCTTTCCTGGTAAGTATACTAGAAAAAAGTATATTTTTTTCTCATTTTTT
TTAACTTAATAACAACAGCAACAATGACAACAGTCAAACTCTTGAATTCTGGTCACAATCCAGATCAATAATTTTTTCC
TTGTAGTTACCTTGGAATTAGGTTCTTAGCCCCTCACTGCTCTCTGTATATTTCTGTACAATATTCATCAGTTTAAATA
AGTACTTCAATTTCATACCAAAGTGCCAAGACTATCCTATTTTCACTCATCTTTAACTTTCTTCTTTTTCATTTCCCAC
ACCCCTGCCATTGCCAAACAAAACTGATTATCTCTGTTTTTATCTTTCTTTTAGACTTTTTAAGGCAATAAAAAATTGG
CTTGCTCAGAAGGCTGATACACTGAGTGTTAGAATAACCCAAAGGTTAGAATGCTTTGGTCAACTTATGGGTATTTTTG
ATCACGTATATCCATTTTTAAACCTGCCATTCATGATGGATCACTGACCCTGGCCCTGGCCCTGACCCATCTCAAAAAG
TTACTAGCATGATTACTGATTAACACTTAGACTGTTGGCTTGAAGTTTAGTAGCCTGAAGGAAAATTTCCAGAGGCATT
ATAATAAGGAAGTTTAATTAAGAGTTAATGTTGACTCAGGAATATTATGTATAGCATTGATCCACAGTGTTGCTAATGA
ATTCATTATGCTGCAAATGCAAGTGATTTGTTAGTACATTGGCCAATAAAAGTGAAATCTGTCTCAACAAGAATGTTGA
AAGAAAGAAGGCAGTGAAACTTTCATCTCCACTGGGAGTGAACTAACTTGCCAAATCTGGGTCATCAATCATAGTAAAA
TGTTCAAAACAAATAATGCATCTTTCATGGTTCACTGTATTCATCAGCACTTTTGAAGTCACCAGTCTAGAGTAGTCGC
CTTTGGCCAAGTTTTCAGTAGCCTGTGGTTTAGGCAATAAGCCTCAACTGTCTTTCTCGAGGATATGTTCCCAGGTGGT
TGTACTCCATGGGCCATTTTCAATCAAATCTGAAAGGACAAAAGGGCAGTTCTGTTTATATGAAATGACATCATATTAT
AACCTCAAAATTGTTGTCTTAAAAGTCAAATCATTATCTAAAAGGTCTCTTAGAATTACTTAGAGCTTGAATGCAAAAG
ACTGAATTTCCCACTCACGTACTTCGCCAACACTCATTACATAGGCAAAAAAGTATAGTAAGTGTCACTTATGTGAGCC
TATGTATGTATGTAGTGTATAGGGGGTGGGGGTGGCAGGAAAGACAGCTCAAATATGAAATAATTGAATTATTCATTG
CCACTGTTCTGATTGCCTTTAAAAAAAGTTTTATCTGGAAGTTATTTCAGACACACTGGAAAGCTTCATGGGTAGTGCA
AAAAAAAAAAAAAAACCACATGCATTCACTCATTGTAAACATTCCACCTCATTTGCAGTATCACTCTATGTGCACATAC
ACACAAATATACATACACACACATTGTCTTTTTTTCTCTGAACCACCTGAGAGAAAACTGCACACATCATAGCCCTCTA
TCCCTAAACTCCTCGATGTATTCCTCCCAAGAACAAGGACACTTTTCTGTATAACTATAGTCTCAAACATCTGATTGCC
TTTGAATTTTATAGCATGACTTATTTATACCTTTTTACTTCGAGTTCTAACTCAGATACTGAGCTATAGAGGAACAGCT
CAACTATTAGTTGAGGGATAGCTCAGATGTCTGATGGAAAAAAGTCACATCAGTAACATTTTGAATTCTGCAAATATAC
ACAATATGCCAATGTATGGGAGATAACTAAATACTGGTTTAGAGAAAATAGATGAGTTAATACAAATAGAGATTCCCC
TTAATTAATAGATCTTATATGTTTGGTTATATGTCTTATCCATGCTATTATAGCTAGCTAGCATTCATTAGGACAGCCA
GAGAATCTTGTCTTTCTGTATTTTTATACTGTTTTTCTTCTTCTGATCAGCCGATTCCAGGTTTGAAAGAATGAAGTA
GTTCCTACTTAGATAATGCTATTGCCTTGCTCCTTAACAGTAAGCAGTGGAGAAGCAGAGTGGACGCTGGTGATGCTGC
CTTTAGTCCTGGAGGGAGTGTCAACCAGTGGGTAATCATTCTGACCCTGCAACACAACCATCCCTTCACTATTTCAGTG
AAGGTCTCTACTTCGGTGGTAGGTCTCTACTCAACATGGTACTTATAGCCGTTTTATACTTGCTATCTTAAAAAAATAT
GCAGGCTTTCACTGCTGTGAACAGATAATTGATATTTATGTTTCATAATCTGTGAAGATAGCTAACACATTTCTGACAG
TTGCAATTTTTTTTCCCAAAACGAGTTTGAGCATGCCTATCCCTCTCTACCCAAGTATATTTAACAGCATTTCTATCTA
TTGGGGAATCTGAGTGAGGATGACAACGTGTCAGGGATTAGAATGGACAGGAAGAGTCTCTGTAAGAGGAGGGTGTGAT
GCTGGAGCAATTTATGAAAATTGGGTCCCCTGGTAACTGTAGTGSATGTTATACAGACAGTCCTGCAGAGTCATCCACG
AGGCTGACTCACTGACAATGTACACATAGAGGTGGGCCTCGAGTGTGTGCAAATAACAAGTTTACTACTGCAGGCAAAC
TCTTCGTTTATTCATTTGACAGATTTATATTGAGGGGCACTGTTCTAGGAGCTGGGGATTTGGTAATAAATAAGATAGT
CATGGTCCGTAACCTCATAGAGCTTACACATAAACTGTTTTGCTTTAAAATATTGTACATTCAGAGGTGTTTGTGCTCC
GACCATATGACTGCAATATGTCATTTGATAAACCTTTCAGGCATGACTTGGACCCACCCAGAACTTAGCTTTAAAGCTA
TCAGATTGACAGGAGGAGAGAACACTGGCTTTAGATGACAAATCATGGAAATAATTATGAAAAGACCATCCAGTTTTTA
ATGACTTTACAAGAATAGTGTTCTTGTGAGACTATTGAATAAGAAGAAATATATGAACATTTGTATCATTCAACTGTCT
AACTGATACCAACACCAATAAATATATGAACATCCTTATTATTCAAGTGTCTAATGAGTGAGGGACAGTGCCTGTAGGA
AGGAGAGCCTCCCAACAATGGAAGCAGTGTTATTCTTCATGGTAGGGAGACCATTTTTTGGTTCCTCACAATGACTTCC
AGGCTGGAATGATTTCCAAGTAGGGCAGGGAAGACAAATATCTGAAGCCTAAGGGAAGCTCCAGGGTGATTCTTGTAGT
TTTGTTTGGCAGACTTTCTAAAAAGCATTGTCAGATAGTTTTGGAGCAAGCAGTTTAGCCATCTACTACCACACAATAT
ATTCAAATCAGAGTAAGCTGGAAGAAAGTCATCCAACATCCAAGTCTCAGCCTGGCCTATGTGAACATACTTCTTCTTA
AGACTAAGCTGTAGGGGTACTATGCTTATTACCTCGGTGTGAAATAATCTGTACACCAGCACCCCATGACATGCAATTT
ACCTATATGACTAACCTGCACATATACCCCTGAACGTAAAATTTAAAAAATTTTTATAGATATGTTAAATTTGAGATGT
TTATTGAACATCAAAGCAAAAATGGTGAATGAACAGATATATGACACAAAAAAGACTAAGGTATAATCCTATATCATGA
GTGAATAGGAATTTTTTGTTATTGGTGTTTGCGTTAGTTGAGATTTTATTCAGCAGTAAATAGAGAGATTTAAAATAGA
AGTGGCTTAAGGAAGACAGATATTTCTCCTTCATGTAAAATCTGAAAGTTGGCAGTCCGAGGTTAATATGGCACCTCTA
TCCAGTACAGTCTTCAAGGACACGTGCTCTTTCCATCTTATTGCACTGTGAGGTGTAGCCTCTGTTGCTAAATTCAACT
CACCATCCAATATGGCTGCTCCGACTCCAGCCATCAACTTCACATTCTAGCCAGTAGGAAAGAGAAAACAATAAATACA
GGCAGATAAAAAGATAGATGACAAATTTCTCTTAAGGGAAGTTTCTAGCACATCATATAATATCTACATAACGCTTCTA
CTACCAACTCATTCACCAAAACTTAGTTATATGGCAACACCTGGCAACCAAGGAGGCTGTGAATTTTCTCTATTTTGGG
CAGTCACATGCTTACATGAAAACAGGTATTTGAAAACAAGTGATGAAGAAAAGCATCAATATTAGGGGACATTTAGCAG
TCTCTGCCACAATGTTGCCTATTAATAATCCTGCATACATTTTAAATATTTAATATCAGTCTGCAACACTCTATTTGCA
AGGTAATGTATAGTATAATCTTTACCATATGAACTTAGTAGCCATGGTGTTCAGGAAAGTTGTGTTATTTTGTGCTAGA
ATATTTTACCTGCCCTAGGTAAGGGCCTAAAGATAAAATGTGCTAGACTAATTAATTTTAATGGCATATAGCAAGAGAT
TTCCAGCGTTAAAGATTGCATCTCCACCTGCAATTTGGGAAAGGAAAAACTGATAGCACAAAATAAAAGTAGTGGGTGT
CCTGAAAACTGTCTGATGCTCTTCATGTTCTTACCAACTCATATCCTCATCTAAATTTGAATCACAGGTACATTCTGAC

Fig. 9.326

CTTGTCGTAGAGAGAGTCCTAAAGTCTCACGAGAGAATTACCGTGCTTGTTCTAACAAGACTGTGTTCCAGCAGGCATG
CCAAAATTTGATAGCTACAAATAGGGAGATTTGAAAGGAAAGAGGTGGGAGAGGTAATTTCTTTTAACTCAACTGCATC
TGGTGGATTAAGGTAGACAATATTACCATTTTGCTGACAGAAGGCAGACATGGCACTAAAGAGGGAGAATGAGCAACCA
CAGAGCTGATTTAATTTCCAGTGGGGTTTATGGAAGCACCAAAACATGATGTAGCCAAATGTTCCTAAAAGTATGAAGT
AATTTAATTTGTTCCATCATTACAAGAAATTAAAGCCAAGCACAATTACATCCCAGTAGTAAAAGGAACCCGCTGAATT
GCCATTGTTATTGACTAAATGAAGTGAGATTTCTGATTACCTTGTCCAGCACATTTTAATTTCTGTCTGTCCATTTATT
CCAAATCACATTACAGGGCCTTAACTGATCTTGACAAAATAAGCTACATTATTAAGGTGCAGTTTAACCTGAGAAGCTT
TAATTACTAGATTAGAGTTTTCAAATGGCATGTCTTCTAGACTTCAGTACATTTAGGGATGTAATTATTAGAGATTCT
TTGTTTCTGATGTGCAAAAGAGACCCAAGTTTAAAAGGAAGACTTAAACTTACGGAAGTGATTTTTTTTTTTCTTCCAC
CAAGAGTCTCTTTGTAGACAGGTGTCTGTTCTGTTGGGAGTGGACTTACACCTCCTGAATGCTGTGATTGAGAGAGCTG
CCTCCATAGTGGAAAGCCCCCGGTAGAGGGTAGTACCCAGATTTCCAAGGGGAGGGGAGTTGGGGGACTAAACGATGTA
CAGTGAACCCTCTCATAAGTAGGGTGTCTAGATGATTTAGCATTCAAACCAGAACACTTTTTAGAATGAAAGGCAATGC
TATTCATAATTACACTGGTATAACAGGCATAGACCTTGGAAGTTCCAGGCCAATTAGGATGTATGGACTCTGTACCTAT
AAGGAAGACAAGGCAATAGATATGTAAACAAATCAATGTGATAGTCATTATAGGCATCTGGAGAATGAAAGGCTCTATA
GGACACTGTGGGTGGGTGGGCATGGAGAACAGTCACTCTCTTAGGGATTTCTCTCCCCTGGAACAAAAGTTACACTAAT
CATGTGACATCTCAGAGCATGAAGTTTGTAGCTCCCTCAACCATATTCATATTCCTCTAACAGTCCAGTTAATGATTCT
CAGATGCATTAGAAACTATGGAAATATTATAGAAAAGAAGCCTTAACAGGGGAAGTGTTTCATGCTTTTTCAGTTCCAT
TCAACAAACATTTATTGGATACCTAGTATATGACAGCCAGTGTTTAGCACCAGAGATCAAAAAATGAATTCATTATGGT
TCCAGCCCCAGAGAAATTCAGTCTAGTAATAAACACATAATTGTGATAGACTGTTTAGTGATTTAATAACTTAAAGAGT
TAACTTCTGATTTGGTTCTCATGCATCAAACATAATATTTGCCAGTCTCTATCTCTACAAGGAGCCCTGGATTTTTCCC
AGTCCCCTACTAATGCTAGATAATATGGCAAAATACACAGGCTGATCAGGCTGTTTTAGAGACTCTTTTAAGCAGAGAT
CTTTTGTTTTCCAGACTGCTAATTTATTTTTTTCTACCCAGAAAGCCCTTCCTACCATCTGAGCTATTCTGACCAAATC
AGCGAAGACAAGCTACAGAGATTTAGGATGTCTGGGCTAAAAAGGTTTGCTTGTTTAATTAGATAAATAATTTGAGAAT
GCTTTCCAGGATTACTGTTCCTAACCACATTGATAAATGCTGGGAAGACTATCTCAGTTATCCAGCATTGGATAACAGA
CTGTTGGAGAAGAGTGAAGCTTCAGTGTGAGCTGGGAAAGATCCCAAAAATCCTAACATGCTCTAGGTGCCTGCATATA
AAATTCATCATCATAGTGACTTTAGGACCACTTGCTATTTTTCAGGCACTGCTTTACATACATAGTCCTATTTAAATAA
TTTTCAGAATCATACTGTGATATAGGTACTGCTTTCTCCATTTTATAAATTAGAAAACAAGCTAGGTTAATTCACTTTT
ATAAGGTGCCAAGCTAGTCAATCAGTGGCAAAGCTCAGATTTGGAAACAAGGACTGCCTTACTCCAAAAACTGTTCTCT
TAAATTTCAGTGTTTGTAAGGTCCCTCACTGCCCCAGCATAACCCAGCATTTGGTCCATTCAAGGATTAAGAGGAACAG
GGATCTGCCAGCCTTGTTTCTGCAGAAAAAAATGGGGGAGGCAGAGCTGGATCTAACCAAACAGGTTAAATTTAAGTGC
CAGGTTTCCGTGAAGGAGAATTATGCCAGCAATGGTTTCTCACCTTAATGAATTCATTTCTAACCATTCTTTGCCCTGC
AAAGACAGCAGGATCCTGGGTCCACAGGGCCCAGTTCATGGAGAGGAGAAAGAGGCACATAATGGGAGCAAAAAGTGAA
GAATTCAAGCTGCAAAATGTAACGGAATTCTCAAAGTGCTGGGTTCTCTTCACTCCCTTATCTGGCAGCTCCTGTTTTT
TCTCCTTTGCCTCCCACAGTTGCCACTTTAAAAAGTCATTTTTAATGTGGCACATATACACCATGGAGTACTATGCAGC
CATAAAAAAGAATGAGTTTATGTCCTTTGCAGGGACGTGAATGAAGCTGGAAGCCATCATTCTCAGCAAACTAACACAG
GAACAGAAAACGAAACACTGCATGTTCTCACTCATAAGTGGGAGTTGAACAATGAGAACACATGGACACAGGGAGGGGA
ACATCACACACTGGGGCCTGGTGGGGGTTGGGGGAGCAAGGGGAGGAAGAACATTAGTACAAATACCGAATGCATGCGG
GTCTTAAAACCTAGTTTGGGCTGATGGGTGCAGTAAACCACCATAGCACATGTATACCTATGTAATAAACCTGCACGTT
CTGCACATGTATCCCAGAACTTAAAGTAAAAAAAAACACAAGAAAACAAACAAACAAAAAAACTCCTTTTTAAACATTG
TCTCAGCGTCCAGTCGGTTGAGTTTCTGCACTTTTAGACACTCAAGCCCCTTCTTTCGTCCTTTGCTCCAGTGGTTGTA
GCTTCCTACCTCCTTCTTACCCTCACCCCTAGGCTTCCACTTTAGAGAATTTGGAGAACTGGGGAAAGAAAAGACTGTT
TTGTGCATGGTGTGCCTGCAGCCTAGTGCCATGAGCTGGTTCTTGCCGTGTCTGAGCCACCAGATCCACTCCTTCTGTG
GTTCACACGCTATTCCCTCTATCCCAGCCAAGCTTGCAAACTCTGATCATGAACTACCAGGTGGAGGSGGGGCATGGAT
ATCCTCCCCAGGAAGCCTGTCTGGAACCTCTGAACTTTTCTGACCTGTGCATGCCTCTACCACAGCACACCTTAATTTC
TTTTGAAATCACTGCATTTGTTCATTTGTTAGTTGTTTGCTTCTAGATGGTAGACGCCTTGAGGCCAGAATTCTTCTGA
ACTAAGCTTTGGAAGTTGAGCACCTCATAGAATACCAAGCTTCTCGTATTACTGGTGGGGTTCAACAAGTATTTGTTGA
GAAGTGATGAATCAAGCTAAAGTTTAAGTAGGCAAAGATGAATCACGTCATAACCTCTGGTTTCCYAACTTTGTCTATA
GAAAAGGCTCCTTGCTAGGTAAAACAAAAACAGAAGAAGTATGTGGATTCTCTTCAACTTTGGGACTCATCACCCTGAA
TCTCTCAGTTATCTCAAGACTGATTCCCTCCACCCTGGAGGGCCTCCCTGCCCCTCCTTTGTACAGCAGTGAAAGGCAG
AAATTGAATAGAAGGAGGGAAAGAGGGAAAAAGGTCTAGATGATCAAGTGGCAAAAACAAATAACCCAGCATGAACAAG
TATGCAGAGAGGGAACTCTGAGGAAACTTGCTGACAAAAGATAGAGATGGAGGTGAGGTCAACCACAGGGGAATAATGG
GGGCAGACAAGTCTAAGGAGGTAGATTTTATAGGGACTTCGAATAGATGAACTGAAGTTTGGGGAAGACCTAAAGGCAT
TAAAAATCCAGTATAAGTTCTTGATTAAGGACAGATATCATAATAATTATTATTATAATACAAGGGGTGCTTTGGGAAC
ATAGGCTATGTAGGAGGGATTGACAGAGGAAGGGAGGAAAGATCTAGGAAAATGAGGGCCAAACGGAAAGGTGTCCTTC
TCCTGTTCATTTGCCAATGAAATGCCTAGGATATATGGTGGTCTGCTCCTACCCTCCACAGTTCTAGCCACTGCAACCA
GGATGCCCAGCAACCATGTCATTCATTCATTCATATGGTCTATCTGTCTCCTATAGGCATTTCAGTGAGTGGCCGCTGC
TTTATGTGTTCTGTTGGTAAACTTGTAGTACCCTGAGAAAACTCACACATTATGGAGAAATTACTTCAAAAAATATGCA
CAGTAGTTAACTGAAATCTTTTTATGTGTTCTACTCTCACGTGAAGTAGAGAAGTAGAGGGAGAGTTTTTTAATTATAA
AAAGGGAGGAAGAGGGAAGAGGGAAACAAAACTAACATTTATTAAGCAAGGTAATTTCTTACCTCAGTGTTTTCAAACC
AATTGGTAGATTTCAAAATCAATTTAAGGGGTCACAATTAATACTTTAAAATTAAATWAAATAGAAAACATCAGAGTGA
ATCATACATAGTAAGGATAAATGTTATTTCATGTTAAATTATGTTTCAATTCTCTGTATTGGCTCGAATATATATTTAC

Fig. 9.327

TCTTATGTGTATGGTATATACTGTTCCTATATATACATTTCCTTTTTATTTTATATATATAATTCTTTTTATTGGTTTA
ATTTATACTGAAATGCATGGTTTGTTAAAGACTGTAAACAAATTTTGCCATGACTATTATTTATAAAACACAAGAGTTT
CTTTAAATAGGAGTCCACTGCTCTCCTCTACCTTTTAAAAATAAATATAGGTATAAAACCTTTTTGTACATTTTTTTA
TATTACTGAAAGCCAGCATCCACATGCCTTCAAAAGTGAGCACCTCTTACTTTAAACAAATCTACCAGGTTATAGTATA
AAATATAAATTTTACTGTAGTTTACTGTCAATAAACTTTGTAAGCCACTGCTTCATTTCATTTAAACTTCCCCAAAACC
TTGTATGAGTGGAGTCTGGGGATTCAGAAGAAGACGGTGGTCATCACAGAAGTTGAAATTCTCTACTGTTTACTTCTTT
TCAAAGGTCTTGTTAGCGGTGGCCTTGAAGGTGATGAAGAAAGACACTTTCAAGGTGGACAGGTATAATTATTGGGTCA
CCAAGAACAAATTTGAAAAACAAAATATGCCAATTGAAATTAGCATGTAGCACCTAAATACCCAGAAGCTTCTTCATTG
AATAATTTATTCATTGAATAAATTATGTAAACTGAATTAGTAATTCCTAGTGAAATAGTGGATGAATTGAGAATAGTGG
TATTGGTAAAAATGGAAAAAAATTTTTTTCTTTTGAGACAGAATCTCACTCTGTCCCTGAGGCTGGAGTGCAGTGGCAC
GATCTGAGCTCACTGCAACCTCTGCCTCCCAGGTTCAAGTGAGTCTTGTGCCTCGCTTGAGGCACAAGATTAGATTTAG
TAGAGATGGGGTTTTGCTTTGATGGCCAGGCTGGTCTCAAATTCCTGGCCTCAAGTCATCTGCCCACCTCGACTTCCCA
AAGTGCTGGGATTACAGGCATGAGCGACCGTGCCTGGCCAAAAAAAAAAAACAACAACAAAAAAAAACAAAAAACAAAA
CAACTTAATTCATAAAACTTAATTCAACAATTTAAGAGTTATACTTCAAGAATGAAGATATATAATGAAAATATGAAGT
CTTCAGAAGGACACACATATAATAATTTTAGTAAATCTCAAATTTGTCTCAAATCAAAAACTTGCTACACATATTTTTG
TCTTAATTATCATAATTAAAAATGTCTACACATTACATAATACTATCTAGTAAATATGCCCTAGAGATTGTGTGTGTGT
GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTATGTACACCCATTATGTTTTCAGACAATTGGAAGAAAATTGTTAG
GCAATTGTTTTTCTTTTATCAAGGAGCTGTCATTTAAGTGCAAAGCTGGAGTATTCAAAATAAAATTTGGGCTTACAAG
ATCAGGGCATGGCAAGACCTATCCAGATTGCTGTGGAATAATATATGCTTCCAAACGCTAATCTTAAGGATGAAAAACA
CATAAATGACATGCCTTCTTCCCCTTGCTTACCTTAGTGACTACAGTTTAAATAATCTAAAATAGCAGATACCATCAAT
ACTGTTGCTAATTATGCTACTTTTCAGAGAGGTACAAGAGTCCTTGTACCTCTAGTAGTAGTGATACCACTACTAGTAT
CAAAAATACAAGATTGTTTTGTTAATTTTGACCATGTTTTAAAAAAAGATAGGGAGGAGATGAATTACTATTAAAAGCA
GCTCTTATATTTTACATGTAATAGATGATAATTACAAGTTTTTAACAAATAACACATTTAAGTTGAACTGAACCGCCAA
AAAAGATAGAGATATGAATATATGATTTTTAGATTAAAGTTAGTTTTAACATTCAAATAAAGTGTGGGAAAATGGCCTG
GAGGCCACCTTCTAGGGAATGTATTTTTAGCCCTATTTTACAAAAAAGAAAACTGAGGTACAGAGAAGTTAATTTGCCC
AAATTTGCCCCATGGTTGCTAAGTTGCAGAGCCAGCATTTGAACCACTGTTCCCAAGTCATACTCTTTCTATTGCTTGT
AACTGTCATCGTAGACCACTAAAGTGGATACCTCCACAACTCTTTGCTTTCCACTGCATCTGGACTACCACAATAGCTC
CTTAGTCTCCATCCTTCTCTCTTCTCCATTCTATCCTCTTAGGCTACCAGTGCACTTATCCAATTCCCACAATATCCAC
TAGCTCAAGGCCACACATTTAAGTGTTCAACTCTATATCCCTTCTCCTCCCTGGAATGTGTCTACTCCACCCAGCCCAT
TTACTGTCCACACATACAACCTTTATTCAGGCTGCAGACATTTCCTACACCTGAAAACAATGCCAGCGGACTCCCTCCT
CCCACAGCCATTAAAACCACAGTCTTCCTTGAAGACCTACATCCAAGTTCACCTTCTTCCTGAAACCCAGCACACTGAG
CTATAGTCCATACCTCCCTCTCCCTGCTCGAACTACAGTAGCACTCCCAGGCTGAATGATTTATATGCTACCTTACACT
GTCTCTAGGCAGCAGCCGATCATGTGTCTGATTTTCTCAGCAGGTTATTATGGTTCCTTCCTGGGCCCAGGCTGCTGAA
TCTTTCATGTTCTTGTATTTCACAGCAACTATCACATCAGAGAGGCTCAATAAATATGTATGGATTTTTTGACTATTCT
CTTTCAGGGGGAAAAAAATGAGAGAAAGAAAAGAAGAAAGGGAGGGAGGAAGATTACTCTCTGACCATTTCTCGATAGC
ATACAAAGTCAGGAGGAAGAGAAATAAAATGTCGTTAGTGGAGATTTCAACCATATGGGAACCTACTAAACACATGTAT
TTGTTAATGTTTTGGAGTTACCTGACATATAGGTATAGGTATAGGAAAACCTATTCCAGGTATTCTTCAAGAGGTGATA
GTTGTTGTGTGAAAAATGCATTCTAAAATCAAACAGGTTTAGATAATGCTTGTTAATAAAATTAAATATCTCATTTTGC
TGTGGACCTTCTAGCTTTTGGTAGGTTCGTGTCCATTAGAAATCACTGTAAAAAGCCTACATATACAATATTTCCCAAG
CTTGTTTGACCACAAAACGTCATTAGTAAGGAGAATCTTATAAGGACAATATTGATTGGAACATTCTTTGGGAAATGTT
TGAAATGATCTTCCCAGTAACCTCAGTGTAAGTGATGCTCTGTCATTAACCAATGACAAATACATATTCTTCCTACATA
GTTGACTTTTCATGATTTGGTGTGGTCTTGTAAAAGCTATTCTATTTGTTGTTTGTTTGTTTTTGAGACAGAGTCTCA
CTCTGTTGCCCAGGCTGGAGTGCAGTGGCAACCATCTCCTCCACCTCCAGGGTTCAATTGATTCTCCTGCCTCAGCCTC
CCAAGAAGCTGGAACTACAGACATGTGCCACACACACCTGGCTACTTTTTGTATTTTTAGTAGAGATGCGGTTTTGCCA
TGTTGTCTAGGCTGGTCTTGAACTCCTGGCCTCAAGTGATCTGCTCGCATCAGCCTCCCAGAGTGCTGGGATTACAGGC
GTAAGCCACTGTGCCTGGTCTAAAAGCTATTCTAAATCATAGGTTGTTCACTCACATTTGGCTCAGAACTGGTTAATAT
TTGAGGGTTGATGGTGATGATGGAAAAATAGTAACTGTTTTAGGATTGAGAATCTGTGGAAAAGGAAGGAAACTCTCAA
ATATTAACTACCTTATTTAAAATTAACTTATTTAAACAACTCTGCAAAGTGGTTCAGTATACCTACTATTGATTGAATA
CCTTCTATATGTCAGATACAGCCCTTGGTACTTTACATTTCTTATGCATTTCTCATAATAACCCTGTAATTCTCAATGT
ATACAATGTGCTCAGGTCTTTTAAATGGCTTATTTCAGATAATACAACTAGAACAATGGCAAGGCTGGAATTCAAGTTC
TGAGTGACTCAAAAGTCCATGCTCTTTCTGATCTATCACACTATTTCCCATGAAGAGCTCTTATAGGTTGTGGATTCTT
CTGTGTGTATAATAACTTTCTTAGCCAAATCTAAATCTCCATAGATATTCTTGTAAAATTATAAAACTAATTTATCTTA
TTCGTGTATGGAGCCAGTTCATATACAACTGGATAAGCCAAATATAACCGATATACTCTTGAGTTCTGAAATTTGTTCT
CTATAATGCACACACACAGTTAACAAATGTAGGTTTACCAGTAGGCCAAAATAGTTTATCACTCATATGTGTTGCTTGTAA
TGCAAGTAATGAGATTAAAAATTGTACATAAGAAATTACCTTTCTGAGACTCTGTTCATAGCCTGTTTAAAAGGGCCTA
GTCTTTTCRGGAAATCTTTTGTGTGTTTTTTCTTTTCTTTTTCTCTTTTTTTGGGACAGAGTTTCGCTCTTATTGCCCA
GGCTGGAGTGCAGTGGCACAATCTCGGCTCACTGTAACCTCCGCCTCCCGGGTTCAAGTGATTCTCCTGCCTCAGCCTC
CCAAGTAGCTGGGATTACAGGCACCCGCCACCATGCGTGGCTAATGTTTTGTATTTTCTTTAGTAGAGATGGGGTTCAT
CATGTTGGCCAGGCTGGTCTCAAACTCTTGACCTCAGGTGATCCACCTGCCTTGGGTTCCCAAAAGGCTGGATTACAG
ACATGAGCCACCATGCCCGGCTGTGTGTTTTTTCTTAATCCCAGTCTTCAACTGGACAAATGTCTCTTTGGCATTACTT
CTTAACCCTTAGGTATCTCATAGTGAGAGAGATATAAATGCTAAACAGAGATTTATGAGAAAGTTAAAAAAAAGAAGAA

Fig. 9.328

GAAGAAAGCAGAGATAGCGATTCCGAATAAAAGATTCTGGGGCAGTGTTGATTAAAATAATTGCTTTCTTTTCTTCACT
CAGGAAAGTATTCTTAACTTGGAGTCCTTGGTGACTTCAGGGAAGTCAGTGAACACTTTTAGAGTGAAAAATATTGATA
ATATGAACTTATGCTCATTTTTCTGGGGTGTTTGCATCAGATGCACCTTTGTGCATTCATCTGTTTCTCCCAAACATC
ATACTGGTGTATTGGTGAATTCTTTTAAAATTTTACTCTATTTTGTAAGGATCATTACATATGAATGATATACCATAAT
ACTTGTCATTTTTATTTTAATGTTAATATTTCACTTCAGTAAGACACCATGATCTGCTTGACCATTACCAAATTTTGGC
AATGTTAGTTCCTAATACTCTTTTAAAAAAAGAGAAAGAGTTTGAAAGCAAAAGACTGAGAACAAGAGATAGACGAGGG
TGATTACATGTAGGAAGCCACACCCAGGCCAGTATTACTGTTTGAATCTCRTTTGGAAATAAATATTCTTATCTGATAG
AAAACAAGCATACTTACTGATTATTCACTCACAAATATTTGCTGAGTGCCTGTAAATGTCAGGAATTTTCTAGACAGTT
ATAGAAAGGCCTAGACACAAATATAAAAATGACATTAGAAAAGTCATACAGGCAGAAGCCAGCAAATTATTTCCAGGTG
GAAAGATTGGCTAAGATGGGCAGTCTTGGATGGGATAGTCTTAGATGTAAATAAAAGGGAAAGGTATTGAAAAGCAGCC
GAAAAAGGCCTATGTGAACAGAAGTGTGACATTAATACAATAAGTAGGAGAGAGTTGTGCAGCAGGTTCTTAAAAGAAT
GAAACAATAAAACCAGGGTTTAAGGAAGATTATTCTGACTTTATAAATAGGACTGTGTTGAGAAAAAGTGAATCCAAGG
AGATCCAGTAGTAGACCATTATATGAATCTAGAAATACACAGATGAGAATTTGACTGAAGGTGACAGTTACAGAAATTA
AGAAGAAATTGGTAAGTCAACTGGCAAAGTATTGGATGGGAATATGGTAGGGGTAGGAGTGGAGATAAGCAGAGTGAGT
GTAAATATACTCCAGAACTTTCTATTTATTAATAGCTTTATTTCTGAGAATACCTCAATTTCAAATAGAAAACATGTAC
CCCTGAAGAACAGTTGAGCTAAACTCACAGAATTCCAGGATCATGGTATTGGATGGGATCCTTGACAAGTAACTGGTCA
GTTTAGGAATTCCCTCTACAAACATAGCTGACCCCATCCAGGCTAACTATAATGAACAACCTTAAAACCAACACCTAAC
CCAGATAGTACAATTTCAGAAATCAGATAATAAATGAATGTTAGAGCTGGGTAGGTGCTAAAGATAATCTGTTCAAACT
CCTTGTTTTCTCTAAGGAATACTGTATGCAGTAATTGACAAAGGTGAAGAACAAAAGACTGTTATATCCTAAGATTGAT
AGTATATGATGGAAACACAGATGCTCTCCTACAGTCCCCCCAGGGAAATAAAATTGATTCCTAAAATTACAACAAGAAT
ACGTAAATAGCATACATAATTGTAACTTTTTTTAAACCTGTTTGCAAAAATTGTCCTGTAACTTTGTTCAAACAACTTC
CCAGACAAAAGCTTCCTCAGTAGCATTCTTTAACACCCTCTTTAGTCTTGTGTTGCTGAAATATGTGTTTGGAATGAAA
ATTATCTTAGCGCAAACCTGTGGGTATATACGGTCTGTACTGAATATCAATGGCAAAGCCTTGATATTTGTCTTAGCTC
AAGCTGCTATAACAAAATACCATAAACTGATGGCTTAAACAACAAACWTTTATTTCTCACAGTTCTGGGAGCTGGAAGT
CTGAGATCAGGGTGTCAGCATAGTCAGGTTCTGGTGAGGGCATCTTCAGGGTTGCAGACTGCCCACATAGCATGTATCC
ACATGGTAGAAAGAGAGCAACCTCTGGCCTCTTCTTATAATGGCACGAATCTAATTCATGAGGGCTCCATTCTCATGAC
CTAATTACTTCCGAAGGGCTTTCCCTCCAAATACCGTGACACCGGGGATTAGATTTCAGCATATGAATATTGGAGAGAC
ACAAACATTCAGTCCATAACAATATTTTCCTTTGACATTTCCTTTTTCTTTGCTCCTGAGAGTTTTTCCTCCTAACTTT
CTGCAGCTTCTCCTTCCCCTTCAGGGACTGCTTAGGATTTTCTCCTTATCTGGTCACCAACCTCTTAACTGGTCTTTAC
TTTTCTGATCTGCCTTTATACTATTCCCAGAGTAATCTTTTTGAAAAGCAAATCTGACCATGTGACTTCCTCACTTAGA
AGATTTTTAATGGCCTCTTTAGAAGAAAATATTGTCTTAGAATAGTATACAAGTCCTCCAAGACTAGTTCTCCATCTTT
ATCTTTGTCCACTGTCTGATCTAAACTTTATATCCCTACCTGTTTGTAGCTTCCTGAATGGCCTGTGTTCTCTAAGTGA
ACTTCTTCAGAATGAATCCCTGTTCATTCCTTGAAATTCTTTTTTCTTTCTAACTACCCTAAAAACTGTTCCAGGTAWC
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AGATTATTTAACTCACAACCTCTCACTTGAACTAAAATAACTTACAAGGCTCTTGTTATTATCTCCAATCTATAGGTGA
AATAAGGCCCTAGAAAGATTAGTAGCTGAATTGCCTGGAATTGCTTGTATGAAGTGGAATAGAGATTGGAATCTTTCTC
CACTCTTCCAGTTTCTTTCAAAGAATAATATCACTCACAGTTGCACACATGTCACATGAAGCCCCCAACCTAGATGCCT
AATTAAACTTAGCTCAAACTCCAATTTTTTGGACAAAAGGCCTCCTTATTCTTATAAAAGCTTTCTCCTCTTTCTTTGA
CTCTTCTCTTATGTCAGCTCAGAGAGACATTTCTGCTTGGGCCAATCTGGCCTTCAAGCTCAGTCCCTTCAATGAATAA
AACAAAACAAAACAAGTCGGGATTTTGTACCTTCAGTAACCTTATTGACGATTGGGAGAAAGGGAAAATGCACGGGTTG
GAGTTACCCTTTAGACCAAGCTGACTCCTTTCTCTTATATGCACACACACACACACACACACACACATCTTCAATAACC
TTATTGATGATTGGGAGAAAGGAAAAATGTACAAATTGGAGTTACCCTTTAGACCAAGCTGACTCCTTTCTCTTACACA
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AGACCAAGCTGACTCCTTTCTCTTACACACACACACATGCATGTGCACAAACACACATTCTCTCGCTCTCTCATGCGCT
TACACACATGCACACACATACATATTCCCTCTCTAGCAACTGGCATATTCCTCCCCTTTCCTGTGTAGATGAGGCACAG
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CTACAAGGTTGTAGTTTTTAAGAGCAAGAAGTCCACTCCCTTTCAAGTCACATTGGGCAGTCCTTCTGTTCATACCTGA
CATATTGTGGGAACATATGTCTGCGTAGGATTTTAATACAGAGATTGTCTTAGATAAGAATAATCGTCAGAGAAGCAAA
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TGTGACTCCTACTCTTGAAGATATAGTCCTACCTGCAGATGCCTGACATGGCCAGTCTTTGAGATGGCCAGTGGCTGAG
GATTTCTCAGATTTCTCCAGAATCTGTTCCCCTAAGCAAGGCCCTACTCATGGTTATTTCTTTTTTGACACACACATCT
TTTTTTTTTTTTTTTTTTTTTTTGAGACAGAGTTTTTATGCTCTTGTTGCCCAGGCTGGAGTGCAATGGCGCAACCTCT
GCTCACTGCAACCTCTATCTCCCAGGTTCAAGCGATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGAATATAGGCATGT
GCCACCAAGCCCGACTAATTTTGTATTTTTAGTAGAGACAGGGTTTCTCCATGTGGATCAGGCTGGTCTTGAACTCCCG
ACCTCAGGTGATCCACCCACCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCACGCCTGGCCGACACAGA
CATCTTGTTCATCATAGGTCTGTGTGCTTGCTCATCTTTTCTCTTAAAAATCCTTCCCACTCTCTTTTATTTCATTCTT
GAGGACTCAGCCTTTTCCCACTCCACCTCTGTCCCTGTCTGATTTAAATAGTCCTCTTTTACTGTCCCATAGCCCACAT
GCTTCCTTCTGTGAGAGTGCACTCTACAGTTGTTTGCTGAAATTACCTCCTCTGCTGGACTCTGGGTAAGGACACACT

Fig. 9.329

CTTTTCATCATCTTGTTTCTGCAGCCTCTAATAAAGTGCATGGCACATAGTCAGTGCTAAATAAATGTTGAGTTACTGG
TGGGACTAAAAGTCAATGAAAGCCAACCTCATGTTTATTTCATATAAAAATTCTACTAGAGGCATAGGCAACATTCGGA
AAAACAATTGTAGTTAGTGAGAAGATAAAAGAAAAAGAAAACCGTCACAAAATTGCACACATCTTTCCTTTGGAAGCTT
TATGAAGTACTAAATAAAGTTTTATATATTTTATACAATTTTAAAATACTTCAAAACAATAATTTGATGCCAGAAATAC
ACTTGGAGATGAGAGCAGCTTGCCACTAGCAAACTCTGCTTAAACCTATTACATGTACACATTGAAAGAGAATCCAAAG
CCTTCATGTATTTCCCATCAGATAAAATGTATAGAGGAAAAAAAATTAAGTCAGCAAAAGTTAGACCTAACCTACACAA
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ATCTACTGTAGACAGTATCAATTCCTTCCKTAGAACAAAGGGGAAATTTTGTAAGAATTAAGAGAAGAGAAGCTGGAAC
TGGTTAGGGAGATTTAAGTATTTGCTCTTAGGAGCTTTTTGTTGTAGTTCTTTTATTTTTAAAAAATCTGGATCAGTGC
TCATCATGACTGGCCATCAGAGAAATGCAAATCAAAACCACAATGAGATACCATCTCACACCAGTTAGAATGGCAATCA
TTAAAAAGTCAGGAAACAACAGGTGCTGGAGAGGATGTGAAGAAATAGGAACACTTTTACACTGTTGGTGGGACTGTAA
ACTAGTTCAACCATTGTGGAAGACAGTGTGGCGATTCCTCAAGGGTCTAGAACTAGAAATACCATTTGACCCAGCCATC
CCATTACTGGGTATATACCCAAAGGATTATAAATCATGCTGCTATAAAGACACATGCACACGTATGTTTATTGTGGCAC
TATTCACAATAGCAAAGACTTGGAACCAACCCAAATGTCCATCAATGATAGACTGGATTAAGAAAATGTGGCACATATA
CACCATGGAATACTATGCAGCCATRAAAAAGGATGAGTTCATGTCCTTTGTAGGAACATGGATGAAATTGGAAACCATC
ATTCTCAGCAAACTATCACAAGGACAAAAAACCAAATACCGCATGTTCTCACTCATAGGTGGGAATTGAACAATGMGAA
CACATGGACATAGGAAGGGGAACATCACACACCGGGGCCTGCTGTGGGGTGGGGGGAAGGGGGAGGGATAGCATTAGGA
GATATACCTAATGTAAATGAGGAGTTAATGGGTGCAGCACACCAACATGGCACATGTATACATATGAAACTAACCTGCA
CATTGTGCACATGTACCCTAGAACTTAAAGTGTAATAATAAAAAAAATCTGGATCAGTTGTTATAATTTTTTTTGTTTT
TTTGAGTCGGAGTCTTCTGCTGTTGTCCAGGTTGGAGTGCAGTGGCCCAATCTCAGCTTACTGCAACCTCTGCCTGCCG
GGTTCACGCCATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGCCCGCCACCATGCACGGCTAGTATTTT
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GCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGTGCCCGACCTCAGCTGTTATAATTTGTATTTTTTTTTTAAA
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AGGAATTATGACAAGCCGATACAGTCCTTTAGCAGACCTTCAAGTGTTGGCAAAGAAACTAATGTCCACATAGTTACAC
ATCCCGTACAGTGGATCCTTTTACCTCAATGGTCAACATCACTGTGAGTTGTGGGTAAGAGTAATGGACTGAACATTTC
ACAAAAAATGACCTCAACCTCTAGCTAACTGCTGTGGCTCTGAGGTGATTACTTTTTTCCTTTTTCAAAAGGAAGCTGC
TTCTTCAGCATCTTCTCCTGGAGCCCCTGGCACAGTTTCAGGCCATGTGTCAGGGGAACCTCTAAGCATATCACTGTGA
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GTTCAAAGGTGCCTTGAAGAAAACTGATGCTGTTGTAGCAGGGGCCTTCAAGGCTCAATTTATTTCTCAGTTGCTGTTC
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AGCAAGATTTGGTGCAGTTAAAGAGTTTTCATGTATTTTTAAGGAGAGCCACAGTGTATACTACTCTGGCAGGGGTTGA
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CAAATGATCCTGAAAAATCGTGGCTAGCTATATTGCCTACTCACCTAGGAATTTGGAAAAAAGCAATATTCTCAGCTCT
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CCATTTTATCATCATACTCAAATCCTGTCTGTCAAAAGTGGCTGGTGCATGGCTTGGACATAAAATGGATATTCTGAAG
TAAATTGTTCCTCCTGTCACTATACTACCTTCTTAAGAACAAATCCTGTGTATAAAGTGCATGATGTCTTGAAGCATTA
GCCAAAACTTTCCTGAATTATTTTCCACATTAAAAAATAACAACTGAAATATAATGTGTGGAGCCACATCCTGTTAGAT
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ACTTGAGGCTCAGGCTTTGAGAAAGTTGGAGTGCAGGGGAGAGGAGCCACAGAAMGCCGAACCTCAGAGGGGACTCCCA
GCTTCATTGTAACCAATGATTGAAAAGATGGCACTGAACAAATCCCAGACACAATGGTTATGCATCTTTAATCCACTGG
ATAGGCTAACTATGGACAGCTCAAATGATCATAAAACAAGTCAATGTCCTCTTAAAATTTCCTACATTCCTATATTATG
GGAATGAGAGAGAGAGGAAAATATCAAAACCAAACCATATAGTAGATGCACTACCATGGCAACTAGGTGATGCTATACT
TGCATATGGAAGTTATTCAGTAAAATGAAAATGATTGTGTTAGAGCCATAGGCGAAAGTATTGTTTGTGATCTTTAGGG
TGTGGGGTTACAATGGACTTCCTATATTTGTGTGTAATGCTTCAATTTTTATAACAAGCATGTAATATTTTTTTACATTC
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GGGAAAAAAAAGCTTCAATCTGAAACTTTAATTCACCTGGCAAGGTTTAGGCAGTTGTTTGTCCATCTAAAGTATATAT
TTACATAGACTGCGGGGTGGAGGAAGTAGAACAAAAAAGAGGCAAATTTTAACCTAGAGTACTCAAAGTGAACAGTAAA
TAGTTCAAGTATTCTTGATAACAATAAGCCACGTGGCACATGTAACAACTACTTTAAAAGTTACTCTAACTTTTACAAA
GTTCACATAAAAAGCTATCTCAAAAATCCCAGGAGCCTAAATTCAGTCCATGAACTTTATTTGTTGTGCCATGTTAATT
TATGGAGTCTAAATTTCAAGGGCAGAATTTCTTCTCCAATACCTGTAGATTCAAAGACAAAGACAAGGGATCCCACCAC
TTAGTGTAAGTTTCTCAGTATCTTCTTTCCACTCGACAATGACAAAGTTTTATCAAATGGACCCTTGGGAGTTTGACTT
CTCCTCACTATGAATGGTTTGCTTATTGCATGCTAATGTAGAAAAGTTCTCCCACAACTGATCTGCTTAGGGACAGTGT
CCCTGGTGCCCTGGGTCAGCCTTTGTAAACAGAACAGGCTTTTCTGTATGCCTTTGAATATGGTCTTTCCGTTTTCTCA
AAATTGTAGTGTACTCTGCACATGGTGGGTAGAAACACCCTTCCAGATTTTCTTCCTTGGCCCAAGATCATCTAGGTCT
TATGCAATTCACAGGGGAAAGGAGTAGTATGCAGGACATGCGTAAATTCTCCTTACCATGTGGTTCTTTCACATTGCTG
TTCCTTTAAGAGAACTCTTAGGCAATTCGGCATATGAAAATGCAGCCTATTGTCAAATTTGTGAATTATAAAGCGTTCC
GACCCCACAACATTGTATATTTTGTTTGCTTGTTTCTGTCCGCCCCAACATTTAGAAGTCTGGTACTTAGTAGGGACTG

Fig. 9.330

GGCTGGGTAGAAAAAGAATGCGGTCTTAATTCCCACAACCCTGCCTCCTTGAAGTAGGTGAATCCTAAGCCTTTAGAAA
CGAACCCCCAGAAACCCTAAAACTTAAACCCTCAGAAACCTTGAGGGTCCTAAATAACCTTGTTTGTGAAACTTCGCAG
GAAGCAGCCGGTCGTGGAGTCGCAGAGGCTCCAGCGGTCTGGGCAACCTGGAGGGCAGTGGCTCGGCGGGGCGCGCGGT
GGTTCTAGCGAGACAGGTGCGCGGCCGTGCGCGCCTGCGTGCCGGTCCCTCCTGAGCCCCGCGGCGGGCGCGACCCCGG
ACGGCGGACTGCAGGCGCTCCACGCCGGGTTTTCCGCCGCTCTCCTAGCACAGACAGTCCCACAGCAGCCCCACAGACA
CACACGCTCGCGCCCGCGCCTCCTCGTCTGCACTTCAAAGCGAGTGGCGCCCGGCTGCGCSGGGGGATGGCACTGCGA
GGTGGCGGGGCCCCCGGGGCAGAGCTCGAGGGGAAGGACGCGGCGGGTGGCACGGACAGGGACAGGCTTTTGCAATTCG
GAATCTTTTCGTAAGGGGGTTGAGGAGGAGCCAGGCAGCGCCGAGGGCCGAGAGGGGCGTGAGGGGGAGTGTTCCCGGA
AAGCTGCGGCGTTGGAAGCCGCGCTGCGCCTGCCGCCCGAGGAGTTGAGAAAGAAAACAGGAAACGTGGTGGCCGCGCA
CCCGGCCGCGGCTGATTCATTCACTTCAAGTGCCGTGCAGAAGGCTCGGCAGGCGGGGCGGGCGTGGGGCCGCGGCTCC
GGGTTGGGGACCGAGGAGATCCGGCTGTGGACCAGACGCTCCTCTGCGGGGCGGGCACCCAAGCGCGCTCGCCACCCCC
TCGCCATCCGCTAGAGCCGGGCTCCTGGACTGGGACTCGGGCCCGCCGCACAGTTGAAAAGTCGCATAGTGGTTTTTCC
GCTCGCGTCGCTGTGTGAAAGTTGGCTCGCCGCTCTTTGCACGCCCTCCCTGGAGGCCGACCCGAGACGCCAAGCTGGA
GAGACCGTGCCTCCCCGAGGCCGGCCGCCCCGCGAGCACAGCCTCCGCCCCCGTTGCACTGCCGGGCTGGGCAATATGA
AGGAGCAGCCCTCATGTGCCGGCACCGGGCATCCGAGCATGGCGGGGTATGGCAGGATGGCCCCCTTTGAACTCGCTAG
CGGACCCGTGAAGCGCTTGAGAACTGAGTCCCCCTTTCCCTGTCTCTTCGCAGAGGAGGCCTACCAGAAACTGGCCAGC
GAGACCCTGGAGGAGCTGGACTGGTGTCTGGACCAGCTAGAGACCCTACAGACCAGGCACTCCGTCAGTGAGATGGCCT
CCAACAAGGTAAGCCCCGGTTCTGCTGTCACTGGTGCCCCCAGGCTGCTGATTCCCATGCCGGCGAGCCACTGGTACCC
ATAGCCCCGGGAAATAAATTGAGAGGTTTTTTAGGCTTACTGCATGTTGGCTATTCTGCTCCTTAGAGGGAGGTTCCTG
TTTCCTTGCTTTGCCTCCCCTAGTCACGCCAGATAAACATTTTCCAAAAGCAATTTGACGTGCTAAATTTAAGTATCTC
CCAAGACACAGGGTTCCTAAGTAACACTGAGCCCTTGCAGCAGAAACCCAGTAGGGTCCATGGGCATTGCATGTTTAAA
GGTGTTCTTGGGATTCCCGGTTGAAAATAAGAATTGGTGGATGTCTGTGAAATCACTTGAATGTCACCACCTAGGGCAC
TCAAACTCAGAAGAGTTCATCGAACTTGGAACCTTCACCCTAATTCATCTAGTTGTCAGGGTACCCCGCAAGAACTGAG
CCTTTATATATTCAGTTGGCCATACATATCCGCAGGAAACATTAACAGAGTTAGAAGGTTCCTTATGATCATTACTTTT
GTTTCCATTAATCTTGGAAAGAAAGCCCAGTTTTTTGAGGTCATTTAGTACAAGGAGGCTTCAACTAGGCATCTGTGCC
ATATGTGCTAAGGTGCTGGTCTTGGCAGTTAATGGAGTTTTGAGGGCTGAGAAGTAACCTTCAGCCTGGGACAGCCTTA
AAATAGCACGGAAGGCAAGGTATAGTGTTTTCAGTTTTGCTGTATTTTTTGGATTTCCTGTTCTTTTTGTCTTTAGTTA
TGCAAGGAGATAATTGGAATTGTGTATGTTTTTAGTGGCTATTTGCCTGTGCATGTCGTATGCAGATGGCTGAAGGATT
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TATTTACAAGGTCAAGAAGGTTATATTATCTTACAGTTCATCTATGTGCACATATCTTTAAATGAGTGATGCTTTTTTT
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CCCCCTGCTGTRGCATTAGGCACCTTTATTCTCATCTGAGTAACAAATTCTTAGTTTTATAAAATATAGTTTGTTTTCA
TAATTTGATTCTCAATAGCAGTAGACATATGCTGAATATGTCCAGTGTCCTAACTGCTAAATGGGAGCACTTTGCCATG
GGCCTGAGTTCTTAATTCTATTGTGTGGTTGATTCTGTGTAAGAAAATGAAGAGCAGAATCAAAAGCCACTTAGCAATG
TGCAAGCATTAGTGTATRTTTTCAAGGTGATTCGACAGTAGTTTTTCAGCTAAATGAATTTGAGCAGCTAGTTACTTTC
CCTAAAATCCATATTCTTAATGTTGAGATCTATGTTTGGATTTAAAACTGAATGTGAAATTTAATAATGTATTGTAAAT
GACTTCAGCTGTCAAGGAATTAATCTATACGTTAAGATTTAAAAATTTTTTAGGTCATAATAATTGCCTAAAATGATTC
CTTTCTTTTAAAGGCACCAGATAAGACAGGGATTTAAAAAAAAAATCTTTATTATGAAGGCCCCAGATTAGACTTTGAG
TTAATTTACAGGTTTAATAGGAGAGGTTGGTCTGTTTGGTTAAAATGAAATCTAGGTAAAGTGAGAAGATAATTTTTTC
AAAATGTAGTCATTCTAGCAATGTTTATGTCTTGTGGCTGAAAAATTAGGATATTTTTTCCTAGCCCACGACAGAGCTG
AATTGAAAAATTATTGCTGTCACACTAATTTTTAACATTAAACTTAGCTCAGCTTAAGCTGTTGCTTAAACTTTTAATG
TCCAAGCCATTCGTGTCTTCTTTAACTTATTTATTTCTAAATCAGTGCTAAGCTTACATGACTGTTATAGACAAAAAAG
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GCCACATCCACAAAAGCTGTAAACTGAGTTGGAGCAGCTGATCGGAAGGCCCCTGTGAGTGTTGCCACACCTTCAGTCT
GAACTGGAAATGTGTACAGCTTGCATCATCTCCACTCAGTTATTTGATATTTCTTGAGTATGAATGAATGAGTCAGAAA
CATTGCTTTTCAGTTGTTAGTTTTATTACCATCCATTCTTTTTACATACACGTGTTCAAACTGATATTTTCAGTTTATT
CTCCTTTAGCCTTTGAAAAATTATGACAGTTTTCTGTGTTCTCTCTTGAGGTTTTAAAAAATTTACTCTAATAGATTGA
AAAGCACAATAAAAACACTAGTAAGAGATCAGGATTTTTAAATGGTGATAGAGAATACTTATTATGGAGATGGATTTAG
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ACACATGTAGGATGCTTGTACCAAGTAGGGTAAGAGATTCCAGATGGCATTTAATTTGAGTGATTAAATCTATGGCATT
TACCCTTATAAGCACATTAATCTGCCTGAGATTTGTACAGATTTCCTTTGGAACCTCATTGCTACAATTGAGGGTAATT
TTAGTGAGGTCTCAAAGCTTTGGAGGCAGGCAAACCTGGAAGTTGAATTATGGTTTTGTTTCTTGCTAATGGAGTTACA
TTAGAGAAATGACTTCAATTTTTTTTAGCTTCAGTTTCCTTAGCATACAATGGGCACCATAATAACTATCTTGAAAAGT
CAGTGTAAGAGTTCMAAAGAATATATACAAAAGAGCTAGCTAATATAGTATCTGACAATAGTAGGCACTGTATCTGTTG
TTATTGCTATTATTTGGGTTTTAGGTCAAACTTCATTGGTTGCCTACGTGGCTAAAATGTCTTTTTACCATTCGGTTGT
AATTTATACCAGACACTTCAAGTTTGATGGATTTTTATAATTCTTAGATAACTGTCTATAGCRCACATTTCTGTATCAT

Fig. 9.331

AAAAATGCTTAAATTATATTTACAGTTTTTGTGGTATAATACAGACATGAACATTCTGAAGTTCTAATTAGAAGTTTAG
GCTTTTCTTAAATTCCAGTTACAGAATGCCAGACAGAAGAGCTAACTAAGTACTTTTCCTGTTTTACTCTAAAACTGAA
AATGCAGACCTTACTAATTTTTAGAACATGTGAAATGTAATAAGGGTTAGTGGTCAATGTGCCTTTTCAGTAAAACACC
TTTTAAGCAGAATAGTTTCACCATGTTTTTGGTTACCTTTCTCTCATGGAAAGTATATTGAGGATGGGAGTCAGTAGAG
AGGAGAGCAGGACAGCGGCCTGGGCCTCAGGGCTTTCAAGGATTATGCTATGGAACCCTGTAACGTTATCCTCTTGTGA
CCTAATAATGCACATTTCACCAGGCCTTCCCTGTAAGTTCAGTGAGGTTCAAAGGAGAAAACGAAATCATTTTGAGTTA
TTCCCAAGACATATCACTATAAAAATGTATTTTGTTTCTGCTCTAATTTTGGGGGCAGTTTGAGGTTTGGCATGGCTGG
AAATGACTGTGTTTCAAGCTGAAAGTCTGTCTTGAAGTTAGAATCCAGACCCCTTTCTAAGAGACTTCAGATTTTTCTAT
ACTTCATTCCAAATATACTTAGGCCAGCTTTACAAATGTGGTCATGACTTCTTTATGGAATTTATTTTGTGTATTTGGC
TTTTGGCAAACCTCTCTAGCATGTTTCTGTTGCCTATAAATTAAATTGCTTTGCTGGGTGCTTTGTCTCAGAGCTTTCT
CTGGCTGCTCCCCCTACTGCTTTGTAATAGTCAATGCAGAACATATAGTAGGACTTTTTGTTGATGTATTTTCTTCTGG
GCAAGAGGGGTGTTATAACAAATATAGGATCTTCATAGAAGTGGCTAAATCTTAAGATATTTCCACATTATGCAACTAC
AGTGTAACTCAACAGATATAAATGTTAAACTTTTGCTAAGAAGGAAACTAAGTTAATTGGAAAAGGCATGTTAGTTTTA
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CAAACTTTAAATTTCAAAAGAAAATATCTTCTATAATTATAGAAAATCAACATTTAGATGTTTTGAGTTCGATATCTGC
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TTGTCTCTGTTGTCATCCGTTCAGTTCCTGTGCCAGTATTTAGTGAAAGTTTAATTATTCCCAACATTTAATTATCAAA
AACTCCTAATTTTTAATTATTCAATAAATTAATCATTACTAGATAAATTTCTTTTTTTCAGTTACATTTTGACTTAATA
TTTGGGGTAGTAGTGGTAACTTCTGTCTGAGAGCATTATGAACTGTCTACGTTTTCGAAAAAAATTCCGAAACATAAGG
ATTGCCCATGATAAAAGAAGTATTTTTTCTAATGTTATGGGTAGATTAAACAAACTGGTATTTTTCTAGAGAGAAAGGA
TGATAGATAATGCTTTTGTTCAGTTTAAGAAGATTTCTGCGATAGTTACATAGACTGTAGCTATCACTTAAGATATAAA
TACATGATGGATGTGCAGTGCTGTTTATGTCATTATTTTCAGTGGATTCACAAAATATGTAGGGTTTGGTTTTCTCTTT
TTCAGCAGGAGGGACCAACTCTTTTTCTAGAACTGTAGATTGCTGGGGTTAATTTTGTGATAGCGTAGCTCTAGTAGGG
GAGCAGTTTTTACATGGCTATTTGTTGTAATAGTTTAATTGACACTGTTAGTCTGAGATCTTTCTAGAATGTAGAGAGA
TCAGTAGCACTTTATTTTAATATTCACATTAGTTTTGAAAGGCATTTGAAGAAGACTTTTTTTATTCCCTGTAACAGGG
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ACCAACTACAATGACAATAGGTTTATTATCTTTTACTCTTAGAGAATAGTTTATCTTTTATAAAGTATTTATTATTATT
ATTTAGTATTCAGAGCTTCTTGTTTTTGTTTTGTTATACTTTGTATGTGATAAGGATGAATGATATTTACTCCCTGGCC
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AAGAAAAACTCTGTGTCACATATTTCTTGCAATGTAAAAACATAATATTTCTTAGAAGAAAAACATGACTTTTCTATTC
TTTAAGAATTTACAGTCCAAATTAATGTTGCTCAAACTTTGTCATTTTTGAGACAGAGTCTCGCTCTGTCGCCAGGCTG
GAGTACAGTGATACGATCTCAGCTCACTGCAACCTCCGCCTCCCAAGTTCAAGCAATTCTCCTGCCTCAGCCTCCCGAG
TAGCTGGACTACAGGCGCATGCCACCATGCCCAGCTAATTTTTGTATTTTGAGTAGAGATGGGGTTTCACCATGTTGGC
CAGGATGGTCTCGATCTCTTGACCTCGTGATCCTCCCTCCTCGGCCTCCCACAGTGCTGGGATTTTGTCATTTCTGTGT
ACATTCATATCTGCTATTATATGTTGAATGTTTTAACTTAATGTATTTTTTATTAATCTTTAAAATTTATTTRTCAATT
ATTCTTAATTGACAAATATTAATTGTATCTATTTCTTGGGTATAATGTGATTTTTAAAATGTGTACATCATAGAAAGAT
TTAGTAAAGCTAATTAACATATCTATATTACCTCACCAATTTATCTTTTTGTGATGAGAATGTCAAAAATCTATTTTAG
AAATTGTAAAACATATAATACGTTATTAATTACTGGGGTCTCCATGCAGTGCAATAGATCACTAAAACTTATTCCTCCA
ATCTAACTGAAATTTTGTACTGTTTGATCGACATCTTCCATTTCTCTCTCCCTCCTCCTCTACAGCCTCTGGTAACCCA
CCTTTCTACTCTCTGTTTCTGAGATCGACTTTTCTAGATTCCCCATAAAGTGAGATCATTTATTAAAGACAATATTTGT
CTTTCTGTGCCTGACTTATCTCACTTAGCATAATGTCCTGTAGTTCCATTCCATGATGTTGTGAATGACAGAATTTCTT
TCTTTTATAAGGCTGTGTAATCTTTCTTTTTTTTTTTTTTTTTTTTTTTTTGAGGTGGAGTCTCGCTTTGTAGCCCAGG
CTGGAGTGCAGTGGTGTGATCTCGGCTCACTGCAAGCTCCGCCTCCCAGGTTCATGCCATTCTCCTGCCTCAGCCTCCT
GAGTAGCTGGGACTACAGGCGCCCGCTACCACGCCCCACTAATTTTTTGTATTTTTAAGTAGAGATGGGGTTTTACTAT
GTTAGCCAGGATGGTCTCGATCTCCTGACCTTGTGATCKGCCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGATCTG
AGCCACTGCGCCCGGCCTGTATAATCTATATATATATATATATATATATAATATATATATATATATATATATATATATA
TCACATTTTCTTTATGCACACTTGATGAACACTTAGATTGCTTCCATATCTTGGCTGTTGTAAATAAAGCTGAAATGAA
TATGGGAGTGCAAATATCTTTTTGATGTACCAATTTCAGTTCCTTTGGGTGTATACCTAGAAGTAGGATTGTTGGATTT
TATGGTAGTTCTATTTTTAGATTTTTGAGGAACCTTCATACTATTTTCAATAATGGTGGTTCTAATTTACATTCCCACC
AACAGTGTAGAAGGGCTCCCTTTTCTCCACATCCTTGCCAACACTTGTTATCATTCATCTGTTTGAACATAGCCATTGT
ACATGGTGGAGAGCAACACATACTGGGGTCTGTTGGCGGGTGGGATGGGTGCAGGGAGAGCATCAGGAAGAATGGCTAG
TGGATGCTGGGCTTAGTGCCTAGGTGATGGGATGATACGTGAAGCAAACATGGCACATGTTTACCTATGTAACAAACCT
GCACATCCTGCACATCCTGCACATGTACCCCTGAACTTAAAAGTTGAAGAGAAAAAAAAGGAAAATAGTCATTCTAACA
GGCATGAGGTGATAGCTCATTGTGGTTTTAATTGCATTTCCCTGAGAATTAGAGATATTGTTGAGTTTTCGTTTGTTTT
TGAGACAGGGTCTTGCTCTTTTGTTCAGGCTGGAGTGCAGTGGCGTGATCATGTCTCACTGTAACCTCAAATTCTCGGG
CTCAATGATCCTGCCTCAGCCTCCCAAGTAGCCAGGACTACAGGTGTGTGCCACCATACCTGGCTTTTTATTTTTTCGT

Fig. 9.332

ATAGAGAGGGTCTTGCTATTTTGCCCAGGCTTGTCTAGAATTCCTGGCCTCAAGTGATCTCCTGCCTCAGCCTCCCAAA
GCACTGGGATTMCRGGCATGAGCCACTGTGCAGGGCTGGGGAACATTGTTTTTTTTTTTTTTTTTTTTTTTTGTATCT
CTGTTGGCCATTCATATTTCTTTTTTGAGGAAAGTGTGTCTATTCAGATCCTTTGTCTAATTTTAATCGATTTGTTTTC
TTACTATTTGGTTGTTTGAATTTTTTATATATTTTGAATATTAGCCTCTTATCAGATGTATGGTTTGCAGATATTTTCT
CCTGATCCATGGGTTGTCTTTTCACTCTATTATTTGGTTGCTTGTGCAGGTACTTTTTAGTTTAATGTAGTCCTATTTG
TCTATTTTTGTTTTAGTTGCCTGTGCTTTTGGAGTCCTATCCAAGAAATCATTGCCCAGACCATTGTTGTGGAGATTTT
CCCTTATATTTTCTTCTAGTAGCTTTACAGTTTCAGGTCTTATGTTTAAGCCTTTATATCTCTTTTGAGTTGATTTTTA
TATGGAGTGTGAGATAAGAGTACAGTTTCTTTCTTCTGCAGGTGGACATCCAGTTTTCCCAACACTATTTGAAGAGACT
GTCCTCTCTCCATTGTGTGTTCTTGGACCCTTTGTCAAAAATCAATTGACTGTAAATACTTGGATTTACTTCTGGGCTT
TCTATCCTGTTCCATTGGTTGATGTTTGTTTTTATGTCAATAACATGCTGTTTTGATTACAGTAGCTTTATAATATATT
TTGAAATGAGGGAATATGATGCCTGCAGCTTTGTTCTTTTTGTTCAAGATTGCTTTGGCTATTAGGTCTTTTTTTGGTT
CATATAAATTTTAAGATTTTTTTCTCTATTTCTGTGAAAAAAAAAAAGACATTGGAATTTTGAAAGGAATTGCATTGAAT
CAATAGAGGAACTGCATTGAATCTATAGATGGCTTTGGATAGTGTGGACATTTTAACATTACTAATTCTTTCAGTGCAT
GAACATGGGATATCTTTTCATTTATTTCTGTCTTCTTCAGTTGTTTAAATCAATGTCTTGTAGTTTCCAGTGTATAGAT
CTTTCACCTTGTTGGTTAGATTTGCTCCTAAGTTTTTTGTTTTTTTTTTTTTTTTTGTGATGGAGTCTCGCTCTGTTGCC
CAGGCTAGAGTGCAGTGGCGCGATCTCGGCTTACTGCAAGCTCCACCTCCCAGGTTCACGCCGTTCTCCTGCCTCAGCC
TCCCAATTAGCTGGGACTACAGGCGCCTGCCACCACACCTGCCTTTTTTTTTTTTTTGTATTTTTAAGTAGAGAYGGGGT
TTCACTGTGTTAGCCAGGATGGTCTCGATCTCCTGACCTCATGATCTGCCCGCCTCGGCCTCCCAAAGTGCTGGGATTA
CAGGAGTGAGCCACCACGCCTGGCTGCTCCTAAGTATTTTTTGATGCTATTGCAAATGGGATTATTTTCTTAATTTCT
TTTTTGGATAATTTATTGTCAAAGTATAGAAATGCTAAGAGCAACTTATTGTTAAATCTAAATACTCACCCAAGTGCCT
CATCTTAAGTAATGGTATACATGAAATCATAGGTTTGATGTTCAAGTTATATTTTTTCTGTATTTTTTCTAAAATTAAT
GAATAACAAAATGAGAAAACATTCATCTTGCACCACCTTAAAGCATTTTGCCTACCATTTACTAACACTGGGCATACTT
TTGGACACACTAGTCTAAATCAGCTGCAAGAACAATTTAGAGACTAATTTATTGTTTTAAACAATCAACATTTTTCCTT
CTTTACCCTCAGTTGGATTTCTCCACTAGAGGAGAAAATGGCAAATTCGTTCAGCAGAAATATTCCAATTCATAAAATA
TTCATTCCTTAGGCAGAATGGTCCGTGGATTTAGAGCACCCTACTATAGACAGCCTGCCTGAATTGGATTCATTCTCTG
CCTTTTACCAAACGTAAATTGGGCCAYGTTGCCTTCTGTGCTTCAGTTTTCTCATCTGTTAAATAGTTGCTGTGGTGAT
TTAATGAATTAAAAGATGGGAATTGTCTCGACTGAGTCAGGAATCATACTAGATACTCAGTAGAACTCATTCATTTCCA
TATGTGAAGGAATAACATTAGTTTTTATTTTATTATTTTGGGGGGTGAGGGTTAGAGAAGGGTGTCTGCCATCCTGATT
TCTATCCTTTTGATAAAGTGACCTAATAATATTGATACTAACCAAAGAGGACTATTATAATGTTTTATTTACTCTTCTC
CCCCATTAATCACTTTTTTTGGTGGTGTTTTATATGTTTTATTCCTTTATTTTCATCCTTCAAGGAGTTTGCCCTTTGT
TTCCTTCTGTAATTTTACAGTATAGCTCATCAAGCAAGCCTGAGATTTTTGTCAGAATATCTGAAAATCTCTGAGCTTT
TTCTAGCAGAAATGCATAATGCAGTGCAGAAGAATAGTCTAGCCAGTGTTTTTCATAAATGAATGTACATACGTTCTTC
CTCTGCATAAGACTGAAAGTAACCCAGGCACACAATATCTTATTAATATTTAATATTAAGAAAAGTATATTAAGAAGGT
AACTCTCCATTCTACCTCTCAACATCTTACCATCTAGTATACACACAAATATTTCCTTGCTCTATCAGCCGAGAGGGTC
TAGAAGCTACCATACCCCAGTAGCAATGAGCACACTTAGCACCCTCATTTTGGTTTCTAATACCATTCTCTGGTAAAAG
GAACCAAGACTCTTTGAAAAAAAAATAGCTGATTTCTAGGGACTCAGGAAGGAAATATGTAAGATGAGCCTGGAGCATCT
TGTAGTGCCAAAAAGTAAGGACCTGCTCAAACAAATGGAACCCTACACCCGTGGGAATATACTGAAGAGTTGCAAGAGC
AAACTGAAAGAGCTCCCAATGGCCAAAGCTAGAACAATTTGAGCAAGAAAATAATATAGTATTGGATTATATCCCAAAG
GGTAAAATAAATATCCATAAACCCATATTGATACAATTTATTAAATAAATACCTAAGTGGGGGAAAATAGACAAATCTC
CTCCTGTGCGGAATTCCCAATAACTTCTATAGATACTCTACTCTCAAGGAGGGAGAACATAACCCCCTACACCGTAAGT
GTGAGCTGTGCATATTGACTTCCTTCTAAACAGTACAGTGTAGAAAGGGAAAAAAAAGAAACTGTAGTGGAGAAWCCTA
TCACTACTTCAGCCAGGTTATCAAGGTCAACATTGACAGTGATAAGTGATAACATGTACCCTCGATATGATCTGATGAA
AATGGCACTTTTAATCTGTGGTTTCCCTACTGAAAACATATAACCCCAGTGTAATCATGAGGCAAATACCAGACAGATC
TCAGTTGAGGGATATTCTACCCTCGAAACTTGACCAGTATTTGACCAGTACTCCTCAAAACTGTCAAGGTTATCAAAAA
CAAGGAAAACCTGAGATACCTACAGCCAAGAAGAGCCTCAGGAGACATGAGGACTAAATATTATGTGGTATCCTGGATG
GGATCCAGAACAGAAAAAAGGAAATTACGTGAAAACTAAGGAAATCTGAATGAAGTGTGGACTTTGTTTAATAATAATG
TATCAGTATTGGTTCAATAATTGTGACAAATGTGCCATACTAAAGTCAGACATTAAAAATGGGAAACAGTGTAGAGTAT
ATAGGAATTATCTGTAATGTCTACACAAGTTTTCTGTAAATCTAGATCTGTTCTAAAACAAAAAGTTTTATTTAAAAGA
TCGAAGCCATCTTTTAAGGCCTATCTGGAATGTTACATCCTTTATAAAGCCTTTTTTTTTAATCCCATCTTCTTCCCAT
CCTATATCTGGGGTGTCCTATGTCTCCCACCTCAGGCTTTCCTAATTGGATACCTTTGACTTTCCACAGAACTTTTATT
TGTAATTCTCTTAACTCTTAGTACAATATTTTGTGTCTCTGTTTTATTGTTCTGATGAGGTCTTCTACGGTGTTTTTAG
CCCAACCCAGTGAGTGTCTGGTGCCTTAGACCACTTGGCCATCCTGACACCCTACACAGTGAGTGTCAATATAACATTT
TGTAGTTAGTCACATAAATTAGTACAAGAATGCATGATGTTGGTTAATGCAAATGCTGTTTTTTACCTTGTATTGGTAG
ATGGAGAGTCTGAGCATTCTACTTTGTGCCTTTCAAGAAAGGTTTTTTTCTTTTTCTTTCAGTGACAGGAATCCTGAGC
ATTTCTCACTTAATCTCAGTTCTGCTTTTAGATACTCATGTCTCAGAAATTTTATCATAGTATATGCTAGATCAATCTC
ATCTCGTTTAAATTAAAAGTTTGTAGTGCACAGGCAAAAACCATAGAGGCCATATTCATGGTCATAAACTGCTCTTTCT
CATCTCTACCTATTTTAGCAATAACATTCTTCTTATTAGTTTGTTCCAAGTGAAAATGACATAACTGAATACTTTCCCT
GCTAGTCTGGGAAGAAAGGATGTGTTTGTTGGCTTTTGCCTGTCAGAGAGTATTCTGCAATGTTTGCCTAGGGCATGCT
TGCATTCCCATCAGCATCTCTGGTCTGCTGCACTGTAATCCCTATAGGGACAGCCTCTGGCTTTTATTACTGACAAGCA
GTGCACTGTGCAGCCATAGGCACCATAATAGGAAACACCTTGGCCTGTCATAAACAGGTCTGGAGAGTAGAAAGTACAG
GCCTGCTGGGGATGTGTCCATAGCAAAGAGGCAAAGATGCGGCTGCCATATTGGAGTAAGTGCAGGCTAATGTCTGCCA

Fig. 9.333

TCTCCATTTCAGAAAATAACTGGCTGATTTTGAAGCTGCTTTTTGTATAAACAGTAGTGTTTTGGTTGCTTTTTGTTTT
TGGCTTAAATATGAATAAAGCCATCTTAAAGAGATTATACCCTTCAAAGTATTTTGAGAAGATCTATAAAGTATTTTCC
TTTTGTTATTTTACATTTAATTCTACCTGATCATTCCAATCCAAACCCAATAGAGAAGGAAAAACAGATATTTCACTAT
AGTGGGAAATTAGGAAAAAAAGAACCATGCAAAAATACAAGTGATTGTGTGTCTTTTAAAAGAATTACAAATCACACTG
AATTACCCAAAATTACAAAGAAAAGTGCATTTATTATTAAGGTAACTTGTGTTGTCTGTGCCTTTACATCAACTCCAAG
TTTTATAAAAGGAGTACATTCTTTGACCATAAAGACTTTATATTTGTTAGTGTTTTTTTCAATCTTTAGGGAAAAAATG
AACTGCAATATTAATGATAGGCTTTGTAGCAAGAATTTAGGAAGACAATAAATTTCAAAATTGGAAGGGTTATCACAGT
TTTTAATAAAGAGATAAAATTATTTCATGAGTGCTTTAAATATATATAGGTGTCATTTTATTATTTACAAGGAAACCCA
TTTCACAAAAGAGGCTAAAGACTGTAAAGATTGAACAAAGCTATAATCCTGTTAAAAATTAAGATAGGTTTAGGAAAAC
TAAAGTCCTAATTTTTTTTTTTTGACCACTTTGGCCAGAGCTGTTCATAAATTAGGTAATCAATRTTTGTTGACTAGTC
CCCTCCCTTGTTAAAAACTAAACACTTGTCCTCTTGTATCTTTTTTAAAAAAATATTTCAAGTAAGTTTCAACAGTATG
CTGTGATAAGGATGAAACCTATTAACATTATCCTTGGTATATATTTTGATTTTCTGTTGTTTTCTTAATCTTATATTGT
CAGTATGGTTTCTAAGATCTAAGATCTCCATAAGGGTAAGTGATAATTGGGTTTTGATAAATCATAAGGAATCTTCTAC
TAGAAATATGTCTGTTTATTTATTGTACATCAGGAAAMGATTAGTTTACTTTATGCCAGAAGATAATGTTTGGGCCTAA
ATCTTAATTTTTCTATCTAGTGTTAATACAGTAGAATGCCTAAAGGATATATAGAAGAAAAGACAAAAAAAGAAGATGA
AGAGAATGCATCATTACAGACTGAATCATCAGTCCCTACAGAAGGGGAATTTGTTCTTTCAAAAGTAGAATTTCAGCAG
CCGGGCGTGGTGCCTCAAGCCTGTAATCCCAGCACTTTGGGAGGCAGAGGAGAGCAGATCACGCGGTCAGGAGTTAGAG
ACTAGCTGGCCAACATGGTGAAATCCCGTCTCTCCTAAAAATACAAAAATTAGCCAGGTGTGATGGTGCATGTCTGTAA
TCTCAGCTACTCGGGAGGCTGAGCAGGAGAATCACTTGAACCCAGGAGGCAGAGGTTGCAGTGAGCCAAGATCGTGCCA
CTGCACTCCAGCCTGGGTGACAGAGCAAGACTCTGTCTCAAAAAAAAAAAAAAAAAAAGTAGAATTCAGCTGGGCATGGT
GGCTCACACCTGTAATCCCAGCACTTTGGGAGGTCGATCACATGAGGCCAGAAGTTTGAGACCAGCCTGGCCAACATGG
CAAAACCTGGCCTGTACTAAAAATACAAAAATTAGCCAGGTGTGGTGGTGCATGTCTGTTATCTCAGCTACTCGGGAGG
CTGAGCAGGAGAATCACTTGAACCCAGGAGGTAGAGGTTGCAGTGAATGGAGATGGCGCCACTGCACTCCAGTCTGGGC
GACTGAGTGAGACTCCATCTCAAAAAAAAAAAAAAAAAAAGTAGAATTCATGGGAAAAATTATTGTTGCTATTTAGCC
TTATTTTTAAATATTTCAGTATATTGTCTGTTTGATACATATGAACAATCTGACTACAACTCATTGGGAAACACCAGTA
TTTACCTTACCTTCTAATGTAAGGCATGATTCCAGGTATTTTCTCATACCTCAAACCTTAAATCTCTAATTTAGTCCCA
GAAACAGTATTCTACATGTCAAAACGTTTTTTGTTTTGTTTTGTTTTTGGAGACAAGTTCTCACCTTGTCAACCAGGCT
GGAGTGCAGTGGCGCCATCATGGCTTACTGCAGCCTTGATCTCCCTGGCTCAAGCCATCCTCCCACCTCAGCCTCCTGA
GTGGATGGAGCCACAGGCATGTGCCACCAGACCGGCTTTTCTGTTTTTTAATTTAATTTAACTTTTTTTTTTTTTTTT
GTAGAGACAGGGTCTCACTATGTTACCCAGGCTGGTCTCAAACTCCTGGGCTCAAGTGATCCTCCTGCCTTGGCCTCCC
AAAGTGCATGAGCCAGTGCACCCAGCCTCAGAATATTTTTAAAGATGAAAACCTAATGCTCAGTTAAACTTTTATAAGA
TCTATGTGCTTCTAAATAAGTGTAAAGATGACTATTTTCTGGATGTTGTATTGGTGGGGAAGATGGAGAGATAGAAGAA
CAAGTGTTTATTCTCTGGTTGTATTTTCTCTCTCTCTCTCTTTTTTTTTTTTTCCTTGAGTTAGAGTCTTGCACTGTTGC
CTGGACTGGAGTGCAATGGCGTGATCTAGGCTCACTGCAACCTTCTCCTCCCAGGTTCAAGCAATTCTCCTGCCTCAGC
TTCCCAAGCAGCTGGGATTACAGGCGCCTGCCACCACGCCTGGCTAATTTTTTGTATTTTTAGTAGAGACAGGGTTTCA
CTATGTTGGCCAGGCTGGTCTCGAACTCCTGACCTCGTAATCTGCCCACCTTGGCCCGCCAAAGTGTTGGGATTACAGG
CGTAAGCCACTGTGCCCGACCTCTGGTTGTATTTTCAAAATATATCCAAATAATATTTTAAAAATGTATTTAGTGAGCA
CTAGATTCCAAAATAGCAAGAGCAATTTCAGCAAAGTATAATTCCTAGAGAGGAATCCTACAGTACCTCGTTTTGCCTT
TTTTGTTCTCTAGGTCATGTCAGGATGGGAGCATAACTGACCTGGCCCTAGTTCCTAGGAGGAGCATGTGCCCTCTAAC
ATGTGCACAGAAGGATAATAGGGTCAGTGGGATGAGGAGACCAAGTGACTAAAGCAGATSTGAGAATCTGAGCTGTAAA
GGATTTGGAGGTGGGATGGAGGGATAAAACCTTAGTGGGAAGCAGACAGCAGATAGAGAAGATATAGGATAAACTCACG
GAAGGTGTAAGCAGGTTCATGATTTTAAAATTAGCCTRTTAAGAGGTTGTGTTGGAGGTCTGTTTTCTTAGTGGGGGCA
AAGTGGCAAGGGAAGTTTCACTTCTGAATAGGGTGGAAAATGAAGATATAAGGAAAGAAAGAGAGAAAGAGGAAAGACG
TATTAGGCAGTGTGAGGCAGAGAAAGAGAAGAGTGGGAGAAGGAGGGGAGTCAGACTTTCCTTGGCTGGAGGCAAACTG
ACCAATGCCCGTTGCTGCCCCTTTCCACCGCAGGGTTCATTTGGTGAAACCTGGTTGGACTGAACCTTTAGGAGAACCT
TGAAGTAAAAAAGAAATCCCAGACAGGTCAGTGGCGGATGTAAATGTTTAAGGAAGAACAGACAGTCAGCTGTAGAAAT
GGAGGGAGGGGTAGAGCTGACTGGAGAGCGATTTATGGATGGTATATTTCATGAGGCTTGAGTCTTTTTTAGCACTAAT
AGTTGGCGTCAGCTTCACCTGTTGCCTCCATGAGTCATGCCCTGGTAGCAGAGGATGGTGGGCCAACTGCCAAGCCATC
CCCTGAAGGACCGGCTGCCTGGGAGTGAGGAAAGGTGGTTGATGGGCTCTGAGACAGCAAGGTACAAACTGAAATGGGG
TGAAAAGAGACTGTCAAAATAAGTATGGGCTGATTTGTTCTAATATATCATAGGTTATTATTAGATGCTGGAAGAGTAA
AATGGAATAGAAGATGAAAAATGTGAACCTTTATCTTGATTCCATTTTAAATCTCCTAAATTCTGAGGAGCTTTGCAAT
TCCTCTTCTGGATATAAATCTGCCCTACAGTAGAGTTGCAACCTTGGATAAATAAATAAATTTGGCCTCCCTGAGCCTC
TGTTTTCCCTGTAAATCAGGACTAACATAATCTACCTCAAAGGATTGTGTTGAAAATTAAGTGAAAACTTACATAAATT
ATGTAGTGTGGTGGGGACATATGATAGGTACTGTGGCCTATCCTTAGGAGGGATGAGGAATGGAACTATTTTTAAACAT
AAAAGGTCAACTTTATATGCTGCCATATAAGTAACCCAGTGCAATTGGAGCTTGAATCAACAGGGCTGGGAGAAAGCTT
ACAGAGTGTGCCTTTGAAATCCCAATACCCAGTCATGGTGATTTATGAGACCTTACCAGCTTGCATATGTGATGGCCCA
CTGAGTTTGTTTACTTTAGTTTTAGCTCAGTTACCCAGCACTCTATGATAGCCTATTTTTTATTTACACTCTCACTAAC
TCCTTTATTATGATTTCTTTGAAAGAATATGAAGACAGCCATAAAAAAGACTCTTATTGAAGTTGAGAGGGTCTCCTGT
AGGTCTTCACTTCACTGTGTCTAAACATTGGTCTGTTGCTTGTGCTTTGCTTTTCTCTCACCCTGGATGACCTTCAAGG
CTCTTCCAAATGATTTCTCTGATTCCCTGAAATACTGAAATTGTGATTAACAGAAGTTTCAAGTGTTAATCAATATCAA
GATAGTAGTTGTCTCTTCCTGGGGAAACTAGAAATGAAAACCAAACATAGGCCTCTGTAATCATTGCACAGATTAAAAA

Fig. 9.334

TGAAAATGCAGCTGAGAAACAGAGGAATGAATGAGAAAACCCTAAACCTAGTTCTAGCCCCAGGATGAGGTCTTTGTCA
TGAGTCTGACGCTAGCCACAGCCGGTAAGAGAAGGAATTCCCTAGTAGTGTAGTTGTTACAAGGGAATGAGTCATTTTG
CAGGTAATTGTTCTTCTTCCATTTTCCACTTGCTGTCAGCCACTTTACAGAGGAGTCGGACTTTGTTCTGCTTAAGAGA
AGTCTCTTTCCTTTTATTGTTTAAAAAAAAAAAAAAAATTCCAGAAGCCCTTAGAAAGAGATTTGTGAGATCAACTGGTT
TACCTTCTTCATTCAGATGAAGTAACAAAGCACAGAAAAGTTATTTTGTCAAGGTTTCTGTCTTGTAGCAAATACAAAC
TTTCTGGTGTTAAACATATGACCCTGATTTGGGTCTTTACTGACATCATCACTTTTTTTTTTTAATTTTCTGAGACGG
AGTCTTGCTCTGTTGCCCAAGCTGGAGTGCAGTAGCACAATCTCGGCTCACTGCCACCTCCACCTCCTGGATTCAAGTG
ATTCTCCTGCCTCAGCCTCCTGAGTAGTGGGTATAACAGGTGCATGACCACGCCCAGCTGTTTTTTGTGTTTTTAGTAG
AGATGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTCCTGGCCTCAAGTGATCTGCCCACCTCAGCTTTCCAAAG
TGCTGGGATTACAGGTGTGAGTCACCACACCCGGCCAACATCATCACTTTTGAATGAAATTTTTAGTTTGGTGATGACT
TTATTATTTGTATTTGATCCTTGTCCATTTTTCTCTAGATCTGGTACTAATTTCATGTGGAAAATAAATCGTTAGGAGG
TTTTCATTTTGTACGTTTTGGCTGCAAACAACCACAACCCAGTCTTTAGGTTTTCACTGAGGGATTTTTGTTTTAGCCC
AATTATTGTATGACATGTATCTGCTCCAGAGGTTCTTATAGGTGAAATGAGATTTTTATGTATCTGTATTCAAACACAT
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TAATGTAAGCCTGTTGTGTGTTAATGAATGATAGGGTAATAATACATTATGTTCCTGTCCTGTAGAGGAGTTCGAGTAT
TCAATACAGAGGACCAGAATGATTGGTCCCAGAAAAAGTGCTCCTTAAGCTGGATCTTGAATACTGAGGATTTATATAG
GCATCTAATAGGGAAGAGGTGGTATTCCAGGGGCTGGATAAGGCAGGGTAGGATGGGGTATTCATGTGGATTCGCTTTA
TTGTATGTTTGCTGGAGAGGAGGGTAGTGGGCATTCTGGAGGAGTGAGCCTCTCTGGAACAGAGGATGTGATTATAGGA
CCAGTGGCAGGTGTGAGAAATGTAGATTGAGGCCATACTGCAGACTGTCTTAAATGCCAGGTCAAGCCATTTGCACATT
GTCCTATAATTCATGAAGAACCCTTACATTTGACTATAAGGAAAATATTATGAAGAAACTAAAATAAGGTGACTTTAGA
AGGTTATATCTGGTGGTAGTGTGCAGGATAGATTATATCAAGGGGAAATTGTACTGAAAGCAAGAAGAAACCGTTAGGR
AATTAGGTGTAAGAGTGATAAGGGCCTGAAATAGGATAGTGATGAAAAGAGAGGAATGAGTAGGAGAAAGATTGCACAG
AGAAGGGTGACAGCATACATAAGACTTGGCAGGACCACAGCCAGAAGAAAGCATGAAATTCTAAACCTGAATAATGGAC
AGAATTATAGTTGGAAAATCATGAAGAGAAGCCAGTTGGGTATTGGGGGAGGGCTGGACAATATGACAGTTAAGTTTTT
AGACATATAATTTAGGTAAGGCTATGTATCTAAGCGGAAATGCCCTATAAGCTTTCAGTTGTCAGGACTGGATTTCTGG
TTAAAAAAAAAAAAAAAAAGAGGGGGCAGGATTTTACTTGGGTGTTGTCTGCAAAGTTGATAGCTAAGACCTTAAGGCT
CATCTGTGAAACGGGAGTGACAGTGCTCATTAAAGGTTATATTAGAAATAAATGAAGTAATTCCAGGAGAGTACATAG
GACTCTCCTTGACACATAGTAGACCCTCAATAAACATTAGGTTTTATTATTGTTTATTATGGGTTTTAGGGAACAACAC
TTTTGTGAATTATTAGAACCTTATTTGGGAAGCTATAAAAGCCATCTGCGTGATGTGTTTTCTTAGTACACCAAATGGA
AGTTCATATGTTCCATTCATATACATGCTTCCCTAGCTGTTAGGGGAAGGTGATAGCGCATGTTTAACTGTTGATCACT
GTTTGTAAGGCTTTTCGTGTTTTTTACATATTTGGTTAAGGATCTTAATCCTTGAGCTGTATTTTGTTCTCATTTGTTT
GTGTCCAGAGTCAAATTAAGTTTAAGGAATTTATAAAGAGCTTCTTTGCAAGAATGATATTAACTCAATGTACTAAAGC
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TAGTATTCCTGTCTGCCTGTCTGTACATTTGTCAGATCAGTGCATTCTGAGAAAATTATGCCAATTTGAAATCTCCAAA
AGCATTCTCAGCCAGTATCCGTGATTCTGATAGTTTACAAACTGTTGATAGCATAAGCTGTTAGGAAGATATTGTAGAA
ATTTTAATGCAGCTGTTTTAATTAGATTGCTTTCCTTATAACAAGTTTCAGTGTTTCTGGTCACAATACAATTTATTAG
CTCCTGACACATGACACTGCTGGATCACCAACCTTAACTCTGATTCTCTCCATACAACCCAGTATCCTTAAGTAAAATG
CTGCATATTTCATTGCTGGTAAGAGAGGCAGGGCCAAGATTCGAACTCACATGAAGCCAACTAGAGAAGCCTATGCTCT
ACACTATTTTACATCTCATAATTCTCATACACTACTAACCTGTTGCAAATGAAAAAGAAGTCTTATTATTGTACCACTT
TTAATTGCACTTATTATTGCCTTCAGTAAAGTCTTCATTTCTAAAATGTCTTAGTAAAACAGTAATTTCATAAAAATAT
TGCCAACTAGGAGTACTAAATTCTAATTTTGGTTATATTATGCGGCCTTGGATAAGGAAGTTTCTTAGGCTTTCATATT
CCAAATTATTGGACTATTCTAAAAACATTTTTAAGTATTTTGATGGATGTAGTCTATTCTAATATAATGTCTTTCAAGT
GTTTGAAAGTTACTACTTATTCAAAACTCAACTGTCTGGCAGCTTTTCTTATCCTGAACTCTGTGAAGAACTTCGGGGA
CAGGAGGTAAAATGTCTTTGAAGAGTAAGAAATCCAAAACTTCATGTATTTACATGTTCTGGTCTTGTCTCATAGGATT
CTTCTTTCTCCTTACATACCCTCCTTTAAATCCGTACCTCCCCCGGTCTTCTCCATCTTGCAAATGGCACCAATGTCCA
TCCTAGACATTGATCATCCCAGAAGTCTAGGAGTTGATTCTTCTCATTTCTTCAGTTCTGTTGTGCAAGTCTTCAAGTC
TTGTCAGTTTTGCCTCAAGCACTTTTACAAACTATCCTCTACAGAGACAGCTTTACAAAATGTAAATCACATCCTATCA
TTCCCTGCTCAGAACCTTCTAATGGTATCCTCACACCCTCTGGAAGGCTCATACCCTCAGGACCCACGTGATGTTGCCT
TGACTTGCCTCGGCTCTCATTCCGTAGACCTGTCCTCCCTCAGACTGGCTGTGTTACTCAGCCTTTGTTGAGAGTGCTG
TGCCCCAAATCTGGTTGGCTTATTCTAGGCATTCGAGTCTCTTCCCAAATACCACCTTCTCAAGTGCAGCTTTTCCTTA
CTACTTAATTTTATAGTCCCCCATCAATGTACGATGTTACCCTCTTTTCCTTCATTGAGAGTGTTTGTAATTTTTTTTT
GTCTGCTTRTTTATTGTCTTTTTGCCCCATAAGTCCAAGGTTTACATGAACAGGGAACTTGTCTGTTTTGTTTATTACT
GTATCCCCTATGCTGGCACATACTATGTAATAAGTGTTTGTTGAGTGCATGAGTGAATAACCATTCTAAAAAACTCTGA
TGTTTAAAGCCCTTTGCTTTATATAAGAATTTTACTTGGAACCCTGGTATTTTYGTTTGTATTTGTTTGTTAATAAATG
TCAAGAGTTCAGTAGTAAGATAGGTTTCAGAAATGCTAAGTTAAACAGAATAAAGAAAGAATATGTATTACAGGTCCTG
GCAGAGCCTTGAATATGCTAACATTTGACAGTGGGAGTCTTTGAGAATTATCACATGAAGCTGCTGTACATTACAACAC
ATTCTAGGAAATGCTGTCTTAGACAAAAACCTGTCATATTAGAATTGGGGTAAGGGGCACGATACTGACCGTGAGGCAG
CAGATTCCTATGGACTACATTAAAAAAAAAAAAAAAAAAAAAGAACAGACTGATAATCTAGGGCTCAGAAAAAAAAAAA
AACTGTGATATGAAACAGTGGCAAAAGGATTCAAAAAGAATACAGCGGTTGGGACTATCTACTTTTTTAATTTTTTTAT
TACACTTTAAGTTCTAGGGTACATGTGCACAATGTGCAGGTTTGTTACATATGTATACATGTGCCATGTTGGTGTGCTG
CACCCATTAACTCGTCATTTACATTAGGTATATCTCCTAATGCTATCCCTCCCACTCCCCTCACCCCACAACAGGCCCC

Fig. 9.335

AGTGTGTGATGTTCCCCATCCTGTGTCCAAGTGTTCTCATTGTTCAATTCCCACCTATGAGTGAGAACATGCGGTGTT
TGGTTTTCTGTCCTTGCAACAGTTTGCTCAGAATGATGGCTTCCAGTTTCATCCATGTCCCTACAAAGGACATGATGAA
CTCATCCTTTTTTATGGCTGCATAGTATTCCATGGTGTGTATGTGCCACATTTTCTTAATCCAGTCTATCATTGGTGGA
CATTTGGGTTGGTTCCAAGTCTTTGCTATCCTGAATAGTGCTGCAGTAAACATACATGTGAATGTGTCTTTATAGCAGC
ATGATTTATAATCCTTTGGATATATATCCAGTAATGGGATGGCTGGGTCAAATGGTATTTCTAGTTCTAGACCTTTGAG
GAATTGCCACACTGTCTTCCACAATGGTTGAACTACTTTACAGTCCCACCAACAGTGTAAAAGTGTTCCTATTTCTTCA
CATCCTCTCCAGCACCTGTTGTTTCCTGACTTTTTAATGATTGCCATTCTAACTGGTGTGAGATGGTATCTCATTGTGG
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TGAGAAGTGTCTGTTCATATACTTCACCCACTTTTTGATGGGGTTGTTTGATTTTTTCTTGTAAATTTGTTTAAGTTCT
TTGTAGATTCTGGATATTAGCCCTTTGTCAGATGGATAGATAGCAAAAATTTTCTCCCATTCTGTAGGTTGCCTGTTCA
CTCTGATGGTAGTTTCTTTTGCTGTGCAGAAGCTCTTTAGTTTAATTAGATCCCATTTGTCAATTTTGGCTCTTGTTGC
CATTGCTTTTGGTGTTTCAGACATGAAGTCCTTGCCCATGCCTATGTCCTGAATGGTATTGCTTAGGTTTTCTTCTAGG
GTTTTTATGGTTTTAGGACTAACATGTAAGTCTTTAATCCGTCTTGAATTAATTTTTGTATAAAGTGTAAGGAAGGGAT
CCAGTTTCAGCTTTCTACATATGGCTAGCCAGTTTTCCCAGCACCATTTATTAAATAGGGAATCCTTTCCCCATTTCTT
GTTTTTGTCAGGTTTGTCAAAGATCAGATGGTTGTAGACATGTGGTATTATTTCTGAGGGCTCTATTCTGTTCCATTGG
CCTATATCTCTGTTCTTGTACCAGTACCATGCTATTTTGGTTACTGTAGCCTTGTAGTATAGTTTGAAGTCAGGTAGCA
TGATGCCTCCAGCTTTGTTCTTTTTGCTTAGGATTGTCTTGGCAATGCGGGCTCTTTTTTGGTTCCATATGAACTTTAA
AGTAGTTTTTCCAATTCTGTGAAGAAAGTCATTGGTAGATTGATGGGGATGGCATTGAATCTATAAATTACCTTGGGCA
GTATGGCCATTTTCATGATATTGATTCTTCCTATCTATAAGCTTTGTGTCCTCTTTTATTTTGTTGAGCAGTGGTTTGT
AATTCTCCCTGAAAAGGTCCTTCACATCCCTTGTAAGTTGGATTCCTTGGTATTTTATTCTCTTTGAAGTAATTGTGAA
TGGGTGTTCACTCATGATTTGGCTGTTTGTCTGTTATTGGTGTATAGGAATGCTTGTGATTTTTGCACATTGGTTTTGT
ATCTTGAGACTTTGCTGAAGTTGTTTATCAGCTTAAGGAGATTTTGGGCTGAGATGATGGGGTTTTCTAAATATATAAT
CATGTCATCTGCAAACAGGGACAATTTGACTTCCTCTTTTCCTAATTGAATACCCTTTGTTTCTTTCTCCTGCCTGATT
GCCCTGGCCAGAACTTTCAACACTATGTTGAATAGGAGCGGTGAGAGAAGGCATCCCTGTCTTGTGCCAGTGTTCAAAG
GGAATGCTTCCAGTTTTTGCCCATTCAGTATGATATTGRCTGTGGGTTTGTCATAAATAGCTCTTACTATTTTGAGATA
CATCCCATCAATACCGAATTTATTGAGAGTTTTTAGCATGAAGTCCTGTTGAATTTTGTCAAAGGCCTTTTCTGCATCT
ATTGAGATAATCATGTGGTTTTTGTCTTTGGTTCTGTTTATATGATGGATTACGTTTATTGATTTGCATATGTTGAAGC
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TATTTTATTAAGGATTTTTGCATCGATGTTCATCATGGATGTTGGTCTAAAATTCTCTTTTTTTTGTTGTGTCTCCGCC
AGGCATTGGTATCAGGATGATGCTGGCCTCATCAAATGAGTTAGGGAGGATTCCCTCTTTTTCTATTGATTGGAATAGT
TTCAGAAGGAATGTTACCAACTCCTCTTTGTACCTCTGGTAGAATTCAGCTGTGAATCTGTCTGGTCCTGGACTTTTTT
TGGTTGGTAGGCTCTTAATTATTGCCTTAATTTCAGAACCTGTTATTGGTCTATTCAGGGATTCAACTTCTTCCTGATT
TAGTCTTGGGAGGGTGCATGTGTCCAGGAATTTATCCATTTCTTCTAGATTTTCTAGTTTATTTGTGTAGAGGTGTTAT
TCTCTGATGGTAGTTTGTATCTCTGGGGGATTGGTGGTGGTATCCCCTTTATCATTTTTTATTGCATCTATTTGATTCT
TCTCTCATTTCTTCTTTATTAGTCTTGCTAGTGGTCTATCAATTTTGTTGATCTTTTCAAAAAACCAGCTCCTGGACTC
ATTGATTTTTTTGAAGGTTTTTTTGTGTCTCTATCTCCTTCAGTTCTGCTCTGATCTTAGTTATTTCTTGCCTTCTGCT
AGCTTTTGAATGTATTTGCTCTTGCTTTTCTAGTTCGTTTAATTGTGATGTTAGGGTGTCAATTTTAGATCTTTCCTGC
TTTCTCTTGTGGGCACTTAGTGCTATAAATTTCCCTCTACACACTGCTTTAGAATGTGTCACAGAGATTCTAGTATGTT
GTGTCTTTGTTCTCAKYGGTTTCAAAGAACATCTTTATTTCTGCCTTCATCGCATTATGTACCCAGTAGTSATTCAGGA
GCAGGTTGTTCAGTTTCCATGTAGTTGAGTGGTTTTGAATGAGTTTCTTAATCCCAACTTCTACTTTGCACTGTGGTCT
GAGAGAAAATTTGTTATAATTTCTGTTCTATTACATTTGCTGAGGAGTGCTTTACTTCCAACTATGTGGTCAGTTTTGG
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CGCTTGTTGCAGAGCTGAGTTCAATTCCTGGATATCCTTGTTAATTTTCTGTCTCGTTGATCTGTCTAATGTTGACAGT
GGGGTGTTAAAGTCTCCCATTATTATTGTGTAGAAGTCTAAGTCTCTTAGTAGGTCTCTAAGGACTTGCTTTATGAATC
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AAGAATGTTGAATATTGGCCCCCACTCTCTTCTGGCTTATAGAGTTTCTGCTGAGAGATCAGCTGTAAGTCTGATGGGC
TTCCCTTTGTGGGTAACCCGACCTTTCTCTCTGGCTGCCCTTAACATTTTTTCCTTCATTTCAACTTTGGTGAATCTGA
CAATTATGTGTCTTGGAGTTGCTCTTCTTGAGGAGTATCTTCGTGGCATTCTCTGTATTTCTGGAATTTGAATGTTGGC
CTGCCTTGCTAGGTTGGGGAATTTCTCCTGGATAATATCCTGCAGAGTGTTTTCCAACTTGGTTCCATTCTCCCATCAC
TTTCAGGTACACCAATCAGATGTAGATTTGGTCTTTTCACATAGTCCCATATTTCTTGGAGGCTTTGTTCATTTATTTT
TACTCTTTTTTCTCTAAACTTCTCTTCTTGCTTCATTTCATTCATTTCATTCATTTCATCTTCAATCACTGATACCCTT
TCTTCCAGTTGATGGAATTGGCTACTGAAACTTGTGAATGCATCATGTAGTTCTCATGCCATGGTTTTCAGCTCCATCA
GGTCATTTAAGGTCTTCTCTATGCTGGTTATTCTAGTTAGCCATTTGTCTAATCTTTTTTCAAGGTTTTTAGCTTCTTT
GCGATGGGTTTGAACATCCTCCTTTAGCTCGGAAAAGTTTATTACCCATCGTCTGAAGCCTTCTTCTCTCAGCTTGTCA

Fig. 9.336

AAGTCATTCTCTGTCCAGCTTTGTTCCGTTGCTGGTGAGGAGCTGCATTCCTTTGGAGGAGAAGAGGAGCTCTGATTTT
TAGAACTTTCAGCTTTTCTGCTCTGGTTTCTCCCCATCTTTGTGGTTTTATCTACCTTTGGTCTTTGATGATGGTGACG
TACATATGGGGTTTTGGTGTGGATGCCCTTTCTGTTTGTTAGTTTTCCTTCTAACAGTCAGGACCCTCAGCTGTGGGTC
TGTTCGAGTTTGCTGGAGGTCCACTCCAGACCCTGTTTGCCTGGGTATCACCAGCAGAGGCTGCCGAACCGCAAATATT
GCAGAACGGCAAATGTAGCTACCTGATCCTTCCTCTGGAAGCTTCATCTCAGAGGGGCATCTGGCTGTATGAGGTGTCA
GTTGGCCCCTACTGGGAGGTGCCTCCCAGTTAGGCTACTCGGGGGTCAGGGACCCGCTTGAGGAAGCAGTGTGTCCATT
CTCAGATCTCAAACTTCATGCTGGGAGATCCACTACTCTTTTCAAAGCTCAGTTGGAAATGCAGAAATCACCCGTCTTC
TGCATCACTCATGCTGGGAGCAGTAGACTGGAGCTGTTCCTATTTGGCCATCTTGGAACCTCCCCCAGCTATACCTACT
TTATTGGATTTTTGTGTCTCCATCAGCTGACATGGTACTTACAGCCTAGAATGAGCATACAAAGGATACTCATTCGCTA
TTCGATGATGACTGACAAACAGTCTCCCAGGATCACCATGAAATAACTAAACTGAGTTTGATTTATTTAAAAATCAGGT
CCAGGTAACAAACTGCACCTGTCCCCTTGAATTGATACAAATAAAAATAAAACAAAAAAGGACAATATTTTACTTTATG
GAACTTTTTATTACAAAGAATTAAAAAAAAATAAAATAATAATACTTAAAAGAATACTTTGACTATTATTTTATCACCT
AAAGGCTTCTCTTATTATTTTATTTTTGGAGACAGAATCTCTGTCACCCCGGCTGGAGTGCAGTGGCGCGATCTCAGCT
CACTGCAACTTCTGCCTCCCGGGCTCAAGCAATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACATGAGTGCACC
ACCACACCCTGCTAATTTTTTGTATTTTTAGTAGAGACAGGGTTTCACCATATTGCCGAGGCTGATCTCAAACTCCTGA
GCTCAGGCAATCTGCCTGCCTCGGCCTCCTAAAGTGCTAGGATTACAGGCATGAGCCACAGCGCCCTGCCAACCTAAAG
GCTTTTCACAACTGGGAATTCACTGAATGTTGTATCATTAAAGCTAATGTGGACCTTGGATAACTGTATGCCTRTTTTC
TGGGAAATAATGGTGGAGCTCTTTGAAAGGGTAAAAATGGTGTTTTATCATACATAACTATGCCTGAGGTTTTTGTTTT
GCATTTATCTTTGGGCAAAGTTGTAAAGTTAAGCAAATCTGGAATTGAAATAATTTGATAACATCAGCTAATATTTTTC
AAAGTTAGATTTTTGAGGTATAATTTACATAAGAGTTACTCTTTCTAGAGGTATAGTTGAATGCATTTTCACAAATGTG
TACAATTGGATAACCACCACCATAATCTAGATATATAGGTAATGTGTAATTATAATATATATGTACTATATAATATAGG
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TGAGTTTTGAGTTGAATTATAAGTTTCACTTATAATACATTTTGTGTTATTGCATCTATTGGTAATTTGTTTCATTTTA
TTGCTTTTTAGTATTTCATTTTTTTCCAGTATGTCATTTTATGGACACAATTTGTTTACCCATTCACCAGTTGACTGAT
ATCTGAACTGTTTCTGGGTTTCTGCTATAGAGAGTTGCTATAAACATTTTCATATAGGTCTTTATATAGACATATGTTT
TCATTTCTCATGGGTAGATACTTAGAAGTAGGATTGCTGGGTCATATGGTCACTCTACTTTTTAACTTTATAAGAAACT
GTCAAACCTTTTTCCAAAGTTTCTATACCATTTTGCATTCTCACTAGCAATGTATGAGAATTTAATTTGCTCTGCATCC
AGGCCAGCATTTTGTATTGTTTGTATTTTGTATTTTATACATTCTAGTAAGTATGTAGTGTGGCATCTCACTGTGGTTT
TACTTTTTGTTTCCCTAATGTCTAATGATGGTCRTGGATCTTTTCACATGCTTATTGATCTTTTTGATTCTTATGAAGT
GTTTGTTTGTTCAAATCTTTTGACCATCTTTTCACTGGATTGTCCTCTTATTGTGTTGTAAAGATTTTTTAAAAAAATAA
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CTTAACAGTTTTTTTCAAAGAGAAATTTGGTAAAGTCCAGTATACCATTTTTCATTTTATGCTTCATGCTTTTGTGGTT
TAAGAAATCTTTGCCTAACGCAAGATCACAACTACTTTCTACTGTGTTTTCTTCTAGAAGTTCTTTAGTTTTAGATTTT
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GATGCTCAATTGTTCAAGCATTCTTTGTTGAAAAGAATATCATTTCTCTTTTATAGCTCAAATTTTATTACTTAAAATT
ATTTTAAGATGCACATATTAAAGTGATATGTGTAAAAGATTATATATTTCTGGAAGCATGCCTATTTACACTAGTTATT
ATTACTTTAGGAGACAGATATTCTCTTTGTTTAAATTGTTTCCACAAAGCATACCACGAAGTACAGAGGGGACATTAGT
AACTATTTTATGATGATTATGGTATTCATTTAGGCCAATTTAAGTGAATTGGAGATCCTAATTTTCTCTATAAGGAGAC
AATACTTTTTCATACAAGATTATTTTTGTGGAGGCTTCATTTATGTGAAGTTTTTGCACCCATTTATTGTCATGATTAT
TCTTCAGTGAAACAAAAGTCTGTAGTAGATATGCTGCTGCTGCTGGTTTTAGGTAAATTGACTAAATAGTTATACAAAA
CTCTGTCTCTACCATATATGAATTCAAACTGTATCAACAATTACAGAATACTATGCTAACATCTAATAAGAGAGTTAGC
CCATGTAGAAGAGAAATATAAATACAGCTATCAGATCAGTCTCATGTTATTTCAGCTTCAAGGAGCCTCTTAGCAAAAA
TGGTTTCCTTTCTCCATACATGTTGCAGGTGTTTACTATTTTAAATGAGACTTTTTTGTTAAAAAAAAATTAAAATAAG
ATCATTTAGAGAACGATTCTCAGCTTGTTCAGATGATTATTTGGTTTTAAAAAAGCAGCCTGGAGTTCCTCTTAATCTC
AAATCTCCATAAAACTTACAAGAGATGTTTTCATTTACTGAAAGGAATAGTTTTTTCTTAATCAAATGTAGAGCCATTA
TCACTAGAGGGCAGTAAATACAAACAGATTTAGTGGATTTACTGGCACTAACGATGTTTTCAGAATACTAGCATTAATC
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ATTATTGTCTGCCTCTAAAATATTTTTAAGGCATTTGAAAGCAAAGGGAGGCTGAGAAACACTAGTTTTCTGTGGCTAT
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CTGAACAGTACTGGATATATGAGAGACCACGTTATATAGATTTGCTTCTTGATTAATAACTACCACGACTTTTAATTTT
AAGGTGAAAGGTGTAAAATAAATGTAGATTGATTATAGGATAAAATATTTTCCAATAATGTAAGTCCTACTGCAAACAG
TGCTACTGCCTGGAAAACTCCTTATGTTGGAGAGGTCCAAGAGCTAATACACTTATTTTAAACAATATTTCTTAAATAT
TTCAAACACAGTAATATAATATACAGCTTAGAATTGATTATATTAACGGATCTATTATGTAGGCTCTAGGCTAAATATA
AAATAATGCCTGAAATAGTTTTCTTTTTTTGGCAATTTAGAGTACTCTGAAACCAGACAGTCTGGGTTCAAATCCTGGC
CCTGTTACTTACTACTGGCTTTGTGACCTTGAGCAAGACAACTTGACCTCTCTGAGCCTTAGTTTCCCCATAATTTAGT
TTTGTTTTTCCCTATTCAAAAATGCATCTTTTCTCTCTTGACCTCTGTTACAAAGTCAATAATGACAGCATGTGTTAAT
GTATCAGCAGTTCAGCTCCATCAGCAGAATTTCAAATATCCTGAAATGTACTGAAATAGTTCAAAAAGATTGTTAATTG
CTTGGGTATCTGGTAAGGACTGAGAAAACAAGGAATAGCAGGGAAGTGGCCTCTAGAAATTCTGAGGGGTATTTCTAGG
AAAGTCTGAAAAAGAGAACTAACTGAACATTATGGGAATTTTTTTTTTCTTTTTTGAGACAAGGTCTTGCTCTGTCAT
CCAGGCTGGAGTACAGTGGTGCAATCATAGCTCACTGCAGCCTTAAACTCCTGGCCTCAAGCCATCCTCCCACCTCAGC

Fig. 9.337

ACCTCCCACCTCCCACCTCAGTAGTATCTGGAACTACAAGCACATGCCACCACACCTGGCTAATTTTTAAATTTTTTGT
AGAGACGGTGGTTTCTCTATGTTGCCCAGGCTGGTCTCGACCTCCTGGCCTCAAGCAATCCTCCCGCATTGGCCTCCCA
AAATGTTGGGATTACAGGCATGAGGCACTTCACCAGGCCAAGAAACTATTTTTTCTATTTCAACAAACACACTTGCATA
TATGTATATAAAATCATTTGGGCATTTGAGAGCAGTGGATTACAGATAAGAAACCTGAGCTCTAGCTGTAACGCTGTCC
CTCAAGTTGTGTTGTCAGAACTTTTCTGGACCTCAGTTCCTTGTCTGAATGTGTCGTCATCATTACATCTGCATATGAG
GGCAGCTGTGTGTTGTTCACATAGCGCTCCCAAACATAAGCGTGTCTCACTATATGGCAGGGCTGTCTGCCTGTGGGCA
CCTGCTTCCTCACCCTGTCCAGAGATCTGACCATGGTGATAGTAACCATGATTCTTTAATTCAAGGCACTGTAAAGTTA
GCAAAAAGATTGAGGATAAACAAATCCACTCCTAGATTCATACTGTTTATCATAGAGTTTGCATCAGCCTAATTATATG
ATGAGCTGTCATACACCATTAAGAGCAAGGACTGGGTTTGCATTTCAATCCTGTCACCTATGGAGCAAGTTATTGAATA
TGTAAGAAGGTCCATCTTTTCATGTTAAAATAGGGATAATATTTATCTTATCAGAATGTTGCCAAGATTAGAAATGAGG
TATGTAAAGTTCTTTGTGCATAGTAGGTGCCTAGTAAATGTTGTAACTTATTAAAGTTTCTTCATTAAATTTGGTGAAG
CCAAGTCTGACTATAAGAATTGTATCTCTCTGGCTCTATTCAAATTTCTCTTCTAAATTATCTAGATTCTCTCTGCAGA
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TGGCTCAGAGATTTTTGAAAAGATTTCTTATTCCCTAGAAATATGGAAACTTTCCTTGGTACTTTTTACTCAATATGAT
TAAATAATCTCCCTTATTGCAGCAAATTAGGGACTTATTTGAATAAGTTAAATCCTTTCACATCCAGCACCTATTAGAA
TGCCTGGCACATAATAGTTGCCAAATAGAAGTCTGTTGAATGAAGGGACCATCACTCACATTCAGCAGGGAGAAGAGGC
TGCAGATTTTAGAGGGAAGGGAAACTGTATGTGTGTTTCTGCATAATGTTTTAAGACAAGGAGTATTATCTACTATATG
TAATCTGTTTTAAATGTTTTTGATGATTTTGCTGAGGGTGAAAACCCCTTGTCCTTTCCTGTCACCTATAATCAGTATAA
AAATATTGATGTTTTGCATCTGCATCAGCCAACAATCTTTTTGTGGCAATAGTACACTACCTTGAGAAATACAGGGACA
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ACAGTGATTCTTAACACTGGGGAACATTCAGGAAATTTCAGGGGACAGTGACTGGGGAGTACTCCTGGTGCTTGGTGGG
CAGAGGCCAGGGAGGCTAGATGTCCTGGGATACATGGGACAGCCTTTCACCAGGGAGGTTTGCTGTGTGTCCCACACAA
CTTCCAAAAAGTCCCAGCAGCTATTCACATAGGTGAAAAAACAAAATGCATTTATAATTCTCTGAGCCTAGAACCCAAC
TACTTTTTACGTATAAGTATTAAATATTTTTACATGGTTTTAATCCACACCAAATTTTCTAGTAATGCAGCAATAGTGT
ATATTGTGAAGATGGCACTTTGTTACATTTGAAACCTTTCAAAGAATCATTCATCATATCAGGAAAAAGGAAAATTTTT
CTAACATAACACCCCTGTATTCATTTTCATGCTACTGTTACTTTTGTGGTAATTCTCCCCATAAGAGAAATCATAGCAA
ACCCTTAGATAGCACTTACTGTTCTAAGAGCCTTATGTATATGCACTAATTTAATCCTCACAACAACCCTGTAAGGTAG
AAACTATTATTCTCATTTTCCATGTGAGTAAACTGAAGTATGGGAAATTTAAATAGCTTCCCCAAGGTCACACAGCTAA
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CACCAAGTATGTTTTGCCTCGAGGCCTTTGCTTTTGCCATTCCTCACTTGGTTTTCCCTTCTCTACCCTACCTCTCACC
CCGCAATCCACATGGCTTGTTTCCTTTCTTCAGATCTCCTGGTATACGTCATCTCATCAGAGGGGCTTTCCATGATCAC
CTTATAGCAACCTCTATCCGTAATCCTTATCCCTTCTTTCTCTCCATTGTGCTTATCACCCCATGACGTATTATGTATT
TATTAACTTAGTTTTGGAATATAAGCTGCAGGTGAGAAAGCTTTGTTTCTCTTTCTCAGGCAGTGCCTGACATAGAGTA
GGAGCTTAATAAATATTGAATGAAGGGGCAGATGTAGAATCGTTAGAATTTGGAAAAAGGCTGGAATATTTGGTCCTAA
GATGTACTTTGAATGATTTAAATCTGACTGAGAAAACCAGTTTGAGGTTGGCAGAGTAGAAGAAGGAGGGTATTTTAGG
CCGAGAATTTGGTAAGACAGAGATGGGATTGTCAGCTGTATGGTGAAGGTGGAGGARTACTAGTCTTTCAGGAACAGAG
CAAATGTAATAGAGCAGCTGAAAATAGGCTTGGCGTTGGGGATTAAGGTCAGATATGGCAGTCTGGAATTTACAGAGGG
ATGTGATGAAGCAGGCATTACTAGCTTTGAAGTAACAGGCTGCGGCTGGATTTGAGGAAAATTGATCTGGCAGTAGAGG
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ATGGAGTGCTGTGATGCAATTGAAAGGAAATATAACATATATATTTTAAAAACAAATGACAAACCAGAGAATTTTTTTA
AATATTAGTATAATAGAATGATTATCATAATGATCATTGTCACTGTCATCTTTACTGTCTGATACCTACTTATCTTCAA
CTTTGTACCATTTGTTGTTTTAAGTGCTTTGCATATATGGTCTCATTTAATCCTCATATGTATCTGTTCTGGTTATTTA
TTGCTATGTAAGAAATCACTTCAAACCTAATACTTTGAAATATGAATGTATTTTTATTAGTTTTCATGGCTTTGTGGGT
TAACTGGTCTTGGCTAGACATTCTTGCTTGGCATTCCTCATATGGTTGCAGCCCAGTGGGTAGCTATCTGAAAGCTGAA
CTGGCTGGATGGCTAGGATGGCTTCTTGCCCCTCAGGTCTGGCTCTGGGCTGGGGTGGCTGGCATTGCTGAAGACTGGC
CAGGCATGTGTGCTCTTTCTTGTGCAAGTGCTCTCTTGCGCTTTCTCTCTTCACTGTCTGTGAAGTTAACATGGACTTC
TTGTAGCATAGCCTCTCAGAGTAGTCAGACCTTTTTTTTTTTCAACCTAATGGCTTAGGGGTCCCAATAGCACATTCAA
AGAAAGCAGGATGAGAGCTGCAAGATTTCTTATGACTTAGCCTCAGCAGTCATGCACCATCACTTGTTGGTTACACAAG
CCAACTCAGATTCAGTGTAGGACAGTGTGGCTCATTAAGAGTATCTTTGGAGACTAGCTGCCACAGTAATCCACTTTAC
AGATGAGGAAGCTGACACACTAAAAAGATTATTTGTCAGTGATTGTGCACAAAAGATTTAAACTTGCAATTCTTGTTCT
CAGTACCAGAGTGAACCTGGGAAAATCATTTTTTCTCTCTAGGTCTCAACTTTATGTGGAAATGAGGGAGTTAGAGGGG
GTGATATTAAAGTTACTTTCTATTTCTCTCAGTCTTTTAAATATTTGGATTCAGATTACGGGAGGGGTAATGGTAAGGA
AYAAACTGAAAGAAACAGCTCTGGATAAAAGATAGGGCTTGCTAACAAAGTTGAATGAAGGAGGGAAGGTGATGCCGTA
TAGGGGAACATGCCGGGTTACTCAAGGATTCAGCTAGATGGTTTATATTAAACACCTGACAGTGTCTGACGCACATGAA
ACACCTGTTGAATGGTAGGAAAGAGTCATAGATTCCATCTGAGATACTGGAAGAAATATAGGCTCACTGACTGAAATGG
AAGTAATTATACTAAGAACTACTTTAAATAGAAAAATGTCTCACAGTTTTGAAAAAGTTTGTCGTGACTAGCAGGGCAT
TCGAGAGGAGAATCTTGTATTCAGAAATATGGCACTGAAGTTCAAGTTAGAAGTGGTCATTGAAGATTGTGGGCCTAGG

Fig. 9.338

GAAAATTAAAGAAGTTCAGGATCCTGGGAGTTGAGGGAGAGTAGTAGGAATGATCAAACATGTGGAACACTTCAGAGAA
GTAGGGAGACCAGAGAAAAGGAGGACCTTAGTATTCCTCTGGGGGTAGCTTTAGTGGAATGTTGGAGCTTTAATTTCTT
CCTTTTGTAGAGGAGTAAGAGTGATGGAAATGAATACAACAGATGTTAACAAAAGCAGAGGACTGTAGCAGCTAAAGGC
CAATAGAAACTCAGAGAGACACAGTGTTACAGGAGTGCTTATCAGAGAGCATGCTCTCTAAGACAGACATGCCACATGT
GGAAATAGTTAAATGTCAGGAAGACTGCAGAGTAGCCATACCAGCAAGTTAAAGCACAGAGTAGTAAGCACAGGCTTTG
AGATGGAGAGGAGGTAAAATGCACAGAATTATATGCTAAAATCAACTAAAACCTAGTTTTTCCTTGTTTCTCACCCACA
AGACCTCTTTAGTATTAAAGTTACAGGGTAATACTACACCAAACCAAATAGAAAATGCTGTTTTTCTAGAAAGAACTTT
GATTTCTCATTTAACCCTCCTCGTAAAATGTCTGATTACTCTTGAGCTCAATTCTGGATTCCTAAGAGCCACTCATTCC
TTTCTTAACTTTGTGTACAGTTATTAAAATGTTCTGTTCTGGCTGGGCACGTTGGCTCACACCTGTAATCCCAGCACTT
TGGGAGGCTGAGGTGGGCAGATCCCCTGAGGTCAGGAGTTTGAGACCAGCCTGGCCAACATGGTGAAATCCCGTCTCTG
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GCTTGAACCCGGGAGGCAGAGGTGACAGTGAGCCAAGATCGCACTACTGCACTCTAGCCTGGGCGACASSGAGACTCTG
TCTCTAAATAAATAAATAAAATATTCTCTTCTGATCAAAATACAGATCCTGAGTTCTATATACAAAACACTGCATTCCT
TATGCATACACAGTGCCCTAGCTTTCACATTTCCTCCCCCCAGAATTGCAAGTGGTCCCACCCCTAGATTTTGAAGGT
TTTAGAACTCTGTCATACATAACAATAGAAACAAAAGGAGCTGAGAGCAGCCATGSCACACAGGTGAGGGAATGTGTCA
TTGCCATCTGTGCCATCTGTGAATTCTGGACATTAGTCGTATTGTTTAATCCCTATGCTTTTATGTTGGATGAGGGGAG
AACTACAGTCATTTCTACATCACCAGGGAGCCACTTGTTTTGGATTTGAGAGAGGGAAGCAATTAAAATGCTCGATTGC
CATTTTTGGAGCAGTTTTTATTTGGAAGGAAGGGAAGCCAGAGGACATTAAAATTCATAGAAAATGCCCTCCAAAAGGA
TGGGCAATTCTTAAGAATGAACTACGAATTTTGAGGAGTTTTATGGTCATTATTCATCACTGCAAGAGGGAAGCCCCGT
TCATCTTTTCTCAGGGTGGCCTCAGAGCTGCAGGGATACCATTATTCAATGGCGTTTGTCGGGTGAGGAGAAAGCCTCC
CCAGAGGCTGGCCCTTGCCAACCAATCCCAAAGCAGCCTGCACCGAGGCCACACCCCCTCGCCTTATAGGCTAAGAGCT
GGAATGCAATTGGTGCAGAGTTGGGGTTTATGGGAGGGGCTTCTTGTCACTCTTCCCGGCTTCCCTGCAGTTCCTTAT
TTGGTAGCTTTTGACAGGACTAGCCTTTCTTGCAACTAAGCATCTTGACATACATTATTCATTAAGCCCTGGAGCTCGG
GAGAGAAAGATGCAGACCCTTAGATCTTTAGATATTCCTTTATCACGTGGATTTTCTTTATTCAGAATAGTTGCTGAAT
TTTGTGCCATTCTGGAGTCTTACAAATGGCATGTATTCGATGGGAAGACGGCTGGATGGGATTTAATGCGAGGCTTTCT
TATGTATACTTAATTACCAAAAATCTTTAAAAACTCATACTCTGCGTGGCTTGTGGAGGTTGTTAAAGTGTCGAGATTT
TGAAGCTAAATACATTTTAGAGCTKWCTATATATATACATATATATATATATATACATATAATCAATCAAAAATGCCTG
AAGCAAACTATTTACTGTCAGTGTCTTGGGGCTACATAAAGGTAAGACTTACTTAGCTTTTGAAAACTCCTTACTCTGA
TTACAAAATTATTTAGAAAGCTTAGACTCTACTGTAATTTGTTCAAACTATCAGTTATGTATTCTTTCCTTACACATGA
ACTAGGAAGAAATACGTGTTAATAGTGGTCAAGATAAGATTGTATAACTTTCATCAGTTGTAGTTTGAGTGTTAAAATA
GCTKTTTTAGATACGCAGTAGTTCTTCTGTTTGTCATGTGGTATATGTTTGAATTGTGCTTGAAAAATATATGGTAATT
AAATACATTCATTGCAAATAAATTATTGGGCCAAATTACTTATACTGATTTATGGATTCCAGTTAGTATGTTGCACATA
AAGTTTATAAAATTAATTTGTGGCTGTTTCTAAAAATCTATACTACTTTAACCTGACGAGGAATACGTTTTTTTCACCT
TTAGCTATAAAGCCCTAGGTGACATTAAAAATTGACATTACTTAACTATGTAAGTGATACTAAAGTGAAAACTTGATTG
TCTATTATACTTGCAAAACTGAACAAAGTTTTTATTACACTGTTTTGTGAATCTCAAGAAATGAATTAATAAACAATTC
AATAAGATTGTGTCCATGCTTGGCAGGCTTTTTCCATGCCCTGTGGTAACATTAGCATTGTGATCCTGTCTCCACAATA
GAAGGAGGTAGAAAAACCTTATTCAGTCCTAAATGAAACATCACTTCACAGATTTTTGGTATTTGAGCCACTCGCTTGA
ACCTGGGAGCCAATCACAACACATTTTAAAAGATTCATTTTGTGTTACTCTGAGGATTTTTCAGATTGGAGTGTTTGTC
GTTTGCTTTGTTTCTTTCTTTTTGAAGGACAAGTTCCCCTTTGTTTTAGAGATTTACTTGAATTCTAAAAAAATTAGAA
AACTTATTTCAGTCTTGGTTRTCCAAGTAGTCATGATTCCTTACCTCCCTTTAAATCTGTGGATGATTCAGATTTTTAA
AAATGTTTTTAAAATATATAGACTTCCATTATTTGAATTTTGTTAGCCATWTCTTGGCTAAAAATCTTCAGAAATGCAG
AAAAGTATAGAGAGTAAATATAAGAWGCCCTCATTATCCGCCAGAATTCAGCTCCTAGCTTTTAGCCAGCTCACAACTG
ATGTTATTTTTGAAGSGCTTCACATTTGTACTGTGATTATGAACCATTTGTACTATGATTATGAACAATATTGCCAAGA
ATCTACATATAGAATTTTAGTACGTTTCTTTTTGAGGAAAATTTTTCCTGGACAGCTTTATGTTTAATACTGTACCTTT
AAAAACATGTAAAAATAGCAAATATAGATATATTTGGTCTTATGCATTTTGAAGGTTTTATTTTTATACCATCAATGGA
GTATTTGTTTAAATAACTTTGAATACTGATATCTACCAAACTTGTAATGCATCACAGTGCAGCATATTCAAATGATTTT
TAGCAGAATATTGTCAGGAAAAAAATAAGAAAATTTTCTTACTATTGGACCCATACCACCTCCTTAAATATATATTGGGA
GGATATATAATATACCCAGTAGCACACTGGCGTGATGTAGAAGTAAAGGAGATTACATTTAAGGACATTTTGTTTTATT
ATTTTAGTTTGCTTCCTGAACAATCTTAAATGCCTAATGTAAATTGAAGAATTGCAGTTCTGAAAAGCAAAATACAGTA
TTGAGATTCAACTGCATTTTTACTTTCCTTTATGCCTTAACTGCTGTACACAGACATTCTGATGTATAATGAGAACAAA
GGATTCAAAAGCATTCACTTAGAAATCCTCCCCTGTTTTTTTAGTTGCAACCCTAAATCTGTGTATTGTTTTCAGACTA
CTTAGGCCAAAAACAATTAGAAATTCATCAATGGAAAATATTTAGAGGTCACTTAAAAAAATAAACTAAATGCTTAAAT
GGTTCTGCATTTTACAATCGGTTCGTTTCAAACAGCAGTTTAATGTTTTGTCCCTTCTAAATATATTAATTGAGAAATA
TGATGGGATTTCCCAGAAGAATACATTGTATTAGCTTTAAATCAGTCCTTCCCCCTTTGGTAATTTTATGTAGTTATCT
TAGTAAATATTATATAATTATTTTTAGATGAGAGAAGTATCACATTTTTAAATGTTTGTTGAATGATCTAGTGCATTTT
TTTAGTACATCTAGCTATGCACTCCAAAACCAATTTGTGAGATCAACTACCAGTTGAGAAAGCACTTATGGTAATTTTT
GTGGTTATTCATTTAGCTTTGCTGGACTGAAACTTTTATATGGATAGCAAAAAAGGAAAACAATGTTAATTCCTTTTAG
AAAATACCCTTGTGTTATAACTTAATGTACGCTTCAGAATTATCTTTAGGAAATTCCTTAGACCGTCTTCCTAGAGTAG
AGAAGTAATTGCTTCAAATATTGTCTTTTATAATTATGTTAAAATGAAATGTTGACTTCCTTGGAGTCCCTTATAAGCC
TTGGTAGGGAGGTGGGCATGTGATGGAGGATTTCTCCAATCCATGTTTTTGTGTTTTAAACAAAGGCTGGAAAGTACTC
TGGGAATAATGTATATGACCAGAAAGATGAACATGCAGGATGTCACTTATCTAGTCTGTACAATATTTAGATTCCTTTC

Fig. 9.339

ACTGGCTTTTTTCTTCAGTTATCTGTACTAACTGGCTATTTGGTGAATTGTTTAAGCAAACTGCCAGGAAAATTATAC
TTCGTTCTTTATATTCTTTTAGAAAAATCCAATAATATATGTAGCATATCTGCAGGTAGCATCCACATGTTCTCTTTGG
GCAACATAATCCTTATACTAGTTTGTGTACAAGTTAGAAGATAAACCTGTGATAACTGGGTCTCTATCTATCTTTATCA
ATCACTCCCAGAAGGCTTCCCTTGTTTTGCTTTATTGAGAGAAGTGCAAGGAGGGCAGCAGTTCCTGTATAGACTGCTG
AGATTCTAGCAATGGTGAAAGCTTTGCCTCATCTCCTATCTTTTATGAAAAAAAAGACTTTGTCATGACCAGGTAGTTC
TTAATAGCAACTTTTAGCTCATAACATGAACAATTTTAGGTCAAAGAGATATTTCATTGAATGTGTGTTTAAAATGTTT
AGCAGACTCTTTTCTTTGGAATATGCTTTGCCTAATGAGTATATTTTTCCAAGTGTGAATTTATCTGTAAAGCAAATTT
TTTTTAATTATTATACTTTAAGTTCTGGTATACATGTGCAGAACGTGCAGGTTTGTTACATAGGTATATACATGCCATG
GTCGTTTGCTGCACCCATCAACCTGTCATCTACATTAGGTATTTTGCCTAATGCTGTCCTTCCCCTCCCTACCCGCTSA
TAGGCCCTGGTGTGTGATGTTCCCCTCCCTGTGTCCATGTGTTCTCATTGTTCAACTCCCACTTATGAGTGAGAACATG
TGGTGTTTGGTTTTCTGTTGCTGTGTTAGTTTGCTGAGAATGATGGTTTCCAGCTTCATCCATGTCCCTGCAAAGGACG
TGAACTCATCCCTTTTTATGGCTACGTAGTATTCCATGGTATATATGTGCCACATTTTCTTAATCCAGTCTATCACTGA
TGGACATTTGGGTTGGCTCCAAGTCTTAAGCAAAGAGTTTTTAAACCTGTGTATGCATGACATTTTAGCTGTGCTTTT
GAGACATAGCTATGGTTTCCCATACTAATGCTATTCCAAATTCTTTATGGGATTTGAGAAAGAGGAGCTAGCTATTTAA
GTAACTATTTTTATGGTTATAACTACAGTCAAATCCTTCATCTGTCTGACCTGCAATGATAAAAATCAGCTATTTACTT
TAAAAGGCCCAAAAGTTATGGACCAAGTGCCAGAAAGTGAGCTGGGAGAAAGAACTCAAATAATATTGAGCATCTACTA
TGTGCCAGGCTAAATAGAAGACACTTCTATATTAGCYCATTAAATTATATGATAGCCCATAATTTACTCAAGAAAATAT
AACTTTGTAAAGAGGGACAGAAAAAATTTTGAACTCTATTATAAATGTCTACAAATATTCTTAGAAGGCCCAAAGTTTA
TTTTTTTCAGTAGGTTATAAGATATAATGCTGAGTGAACACAAGCAGTAACCTATGTTCTGTATACCACCTGATGCCAG
TTTTAAAAATATGTATTCACATACAAGGGTAGAAAAAAGGCATAAAGGAAATTTAACAAATTATCTGTGGTTATCTTC
CAGCAGTGGGGATTTACATTATTTTCTTTTTTTTGGTATAGCTTTCTACATTTTCTATAGCACATGTACATTTTATAAT
TAGAAAGGAGTTATAAAAACATATGAACAAAGAAGTGAATTTAGTGTTCCTGAGTTTGAGACTAAGCTTTCTAGACCAG
TAATTTAACAACCAGAATTTGTACTGGTCATGCCAGTTCTTTGTTTTTTTGTTTGTTTGTTTGTTTTTTCCCCAGCATT
TATTTTATTTTTATTATACTTTAAGTTCTAGGGTACATGTGGGAATTGAACAATGAGAACACTTGGGCACAGGAAGGGG
AACATCACACATTGGGGCYTGTTGTGGGGTGGGGGGAGGGGGGAGGGAAAGCATTAGGAGATACACCCAATGTAAATGA
CGAGTTCTTTGTTTTTGACTACGCTGGCATGCGAATACACATTTCTCTCATCCAACAGTCCATTGAAATGGTTGAGGGT
TTTTTGTTTGTTTTGATAACAGTTAAATGCGGAGTTAAAACTTAATCTAGATGGTCTATAAGATTGACTTTGGAAGTTA
TTTAGCAAACGGTATAGAGTTAGGCCATCTTGGTATGAATTATGCAGAGAAGCAAAATAATTCTAAATAATTAAATACT
AAGAATTATATTTCAAACATCACTAAAATATACATTCAACACTTACCTTCATACTTAAATGAGAATTTATGGTGAAATT
TCAAATTTTAAAGGCTAATCTGATGATTAGAGTAAATGCATCTGACTTTTTTTTGTCAAGTATCTAATAGCAGTTACTC
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TCAGAGTCAAAGGACTCTGAAATGCTTAATGCTTAAGAAACAGCTGATGGGGGTGGGAGAAGTGTAAAATCTTTGGGAG
ATTTGGATACTGGTAATGCCATGTGGTGTTGGTAGGTTAATTCCAGTGTTTCTTTCAATGAAATAGGCACTATGGCATC
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GGATGTTGAGAAACAATAAGTGTTATACTCTTACTTGAAAAACAACTTTTAAAAGGAAACATTATACAGTATTTATTTA
AATATTTTACTTCTCCATAGTCCTGGAAGAGTACTCAAGTCTATTAAGTTTTGCTTTGGAGTAAAAGACTAAATTTTGA
GCCCTTGATCAGTATATATATTCATTTCTGCTAATGATAAATTAATTGAAGAAAGCATTCCATGTTTTATTGTATGGCA
ACACTTTTATGTGCTATAAATTAGTTTCTCTCTTCTCTAAATAACTAATAATACATCTTAATTTTTAATTCCCTTTTCT
TTGCTTATTTCTCCTGATTTTCCCTTCAGCCCTTGGGAGTCTAAATTTGTGCTGGTCAGTCTGGTGGCCATGAGCCACA
TGTGATTATTTAAATTAAAAGTAGTTAAAATTAAATAAAATTCAAAATTTGGTTTCTCATTTGCACTAGCCACATTTCA
AATGCTTAGTAACCACCTGTSGCTAGTGACTGCTATAATTGGCAGCACCGATTATGGTGTTTTCCCCTCATTGAAGAAA
GTTCTGCTGGAAGGCACTGTTCTAAATTGTCAGGACAACTTAAAAATTCTTTGGGCATATCTTCCTGTATCTCAGAGTA
TGCATATATATTTCACTTAAATTTTCCTCTTCTATTATTTCATTTTACTTTTCTGTTTTTCAGTTTAAAAGGATGCTTA
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TGAGAATAACAACATGCAATTAAATTTTTTTCTTCAGTTGTTTGCTTGTTTGTTTTTGTAGGAGGATTGGGGTGCCAAC
TCATTTTGGAAACCAAACAAGTGTTAGAAGTTCTATTTGTTTTCATTCGTCATATTAATAATTCGACACTATCCGCCTC
TGAGTTTTAGAGTTGCAGGTGACAAGGTACATTTTCTTAGTTTTATTTAGGACTTTAGGAATTCTTGAATTAAGATTAT
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TTAAATGCCAGCCATTGTTGGGCAATAGGTGTTTAATGATAAATTAGAAATGATTCCTGCCCTCGATGAATTTACCGTC
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TTGGTGTCCTGGGACAACTCTTGTACCTCATCCACAGAAAGAAAATGCAGTAAATAAAGGTCAGTAATTTGAATGTATC
CTGGACTTACTTTCAAAACAAAATTGCTGTTATATATAGTTAACATTTATTAAACACTCTAGAATATGTTCTATATATA
AGGATGAGTTAGAGTTGCTCATCACTGCCTTGAAATCGTGGATGAAAGTAAGAAGATATCTTAGGTCTTTTACTATAGA
ACACAATTAGCTTATGTACGTATTCACTTATCAGGTAATATTTATGATTCTCTATGCTCCCATAAAACCTGGGGATTTA
ACCCTTATCTCACTATCATACAGAAATAAAAAGTAGCAGAATTAATCTAAGTCATCCAAAACCTGCTGTTTCAGCTCCC
ACAGTGTTACCCATTTCAGTTAGCTGTTAGTTTTATATACTGCTGTTTTCATGACATTTGCGTATAAAGTTTCTACCAT
TTCAAAGTATGTATTGAAACTGTAGTCCTTAGTTGGCAAGAACAATATTCAGTTCATTAAGTYAGTTTCACAAAGGAAT
GGAATTGAACAGTGGAAATAACCACCTGTTGTGTATTCTGAGTCTGCTGTCATGCTAAGTCTTGCAGCATTTTTTATTA
GGACATTGTATCAAAGAGGTAACCATGGAATACATTTGATATTATTATTTTGTAATGGAACTTATTTGCTTAATTTTGT
GTTTGAAGACATCAAATTAAGTCCAATTCAAATGTAAATACTGAACTCTCTAAAAGGAAACTTTTTAGTTGGAAACATT
TCCTGGAATATATAATGATCAATTATAATCCTTCCAATTATGCATATGATATAAAACAGATAGAATTAATAATAAATAT

Fig. 9.340

AGAACATTTTCTAAATTTCTCAAGATAAGCAACATGAAGTGGAAATTCCTTCTCCAACTCAGAAGGAAAAGGAGAAAAA
GAAAAGACCAATGTCTCAGATCAGTGGAGTCAAGAAATTGATGCACAGCTCTAGTCTGACTAATTCAAGTATCCCAAGG
TTTGGAGTTAAAACTGAACAAGAAGATGTCCTTGCCAAGGTATGATGATTTCAAAGATCAGGATCATAAATATTAAATG
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TTTTGAAGATGGGAAGGCATTTTATAAAGCTCCTTTTAAAGTGCCTTAGACAGGTGGTTTGGTATGTTTTAGGGGTTTG
GGGGGTGATTATTTGCATCTTCATTTCATTGTTTGGCCTTAAAGAGTTAGAAATCTGTCATGTCTTCTGGGTTTTAGGA
AAACAGTTAAGGTTTTGTGAATAGATTTTATCCATTAAAGAAGTGCTTTGTGATTGATACTTAAAAAGTACATAAATGT
GTTGTAATGTCAAAGTCACAAGGTTAAGCCATACTGTTCAATTTTCAGTACATTTAAGTAAATGTGCCTAAAGTTTGCC
TATGCTTACATGGTGTGTCTGTTAACATTTAAAATGAATCATTGTTTAAAACAATCTAACAATCTTTACACTGAAGTCT
GTTTTGTTTTGTTTTGTTTTGTTTGTTTTGAGACATAGTCTCGCCCTGTCACCCAGGTTGGATTGCAGAATGCAGTGGC
GCGATCTTGGCTCACTACAACCTCTGCCTCCTGGGTTCAAGCAATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGATTA
CAGGCACACACCACCACACCTGACTAATTTTTTTATTTTTAGTGGAGATGGGGTTTCACCATGTTGGGCAGGCTGGTT
TCAAACTCCTGACCTCAAGTGATCTGCCCGCCTCAGCCTCCCAAAGTTCTGGGATTACAGGCTTGAGCCTCTATGCCCG
GCCACCTAAGGTCTGTAATTTTTAAATGATTGTGTTCATTGAGTCATATTTTACTCCACTTTCTAATATTTTAGTATCT
TTTTTTTTTTTTCACTCCAGGAACTAGAAGATGTGAACAAATGGGGTCTTCATGTTTTCAGAATAGCAGAGTTGTCTGG
TAACCGGCCCTTGACTGTTATCATGCACACCATTTTTCAGGTAAGGTGGTTGAGTTSTATTACATTTATTTTATTTAGG
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TTATCCTTATTTGCTCCTTTGCCAAGGGACAAGTAAAGATACAGAAAGGTGGAGTGTGGATAAACCACAAATAACATCA
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GACCCTTTGCTCCAGCTTAGGGTGGGATTTAAATGAGAAGTTGAGGCTGCTGTAGATATCTCGGGACCGAAATGGGAAA
CTTCAGCCCTAGAGAGGACGTTGATTTTTAGTTGGTGTGATGCAGGGGTTGAGTTAATAGTGCTTGACTGGAGCTGCCT
CCATGATAATGGGACATAGAAACTTTTAGAGTTGGCACCTCATTCCTGACACCATACAGCTAGGGCGTAGTATTCTTGG
GTTCCAGCAGGACAACCCAACTCTGGTTTTGTCCCAGAGTCCCTGGATCTTCTCAGAGGTTCCCATTTTCCTCACTAGA
CATGTGAGAGTGCAGTTGCCATTTCCAGGTTATCCACTGGCAACACTGGTGTGTGATTTTTTTTTTTAAACATACTCTA
TGGAGAAATTTTTCACATAAAGACAAAAATGTTAAGATGATTTTTTTTCCTACAGGAACGGGATTTATTAAAAACATTT
AAAATTCCAGTAGATACTTTAATTACATATCTTATGACTCTCGAAGACCATTACCATGCTGATGTGGCCTATCACAACA
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GCTTATGAAAGTTGGTCACAGATTTAGTGATTGATCTGTTTATGATATTGCTTCTTTGAAATGATCCACTGAACATTTC
ATAAAGCACATCTGGCTTACTCACTTTTTGTTCATTTGTTTTCTTGAAATCTAGTCTGACGGCTTTTATTTATAGGCCA
AAGAACGTTTTATAAAACATAAGCAATATATTGATATTTTTTCATAGAATATATTAGAAGGACATACTTTAATTTTTTCT
AAATCCTAAGAAGTTATTTCATTAGTTGTTTACTAAAGCAATTTGATTTTCTTAAGAAATATATTTTATAATTCAGTTT
GTTTTCATTATAAAATTATGTTAATACCTCATCATATGGGTGAGTGATTCTCAACTGGAGATGGTTTCTCTTCCCCTTT
CTTTCCCTCCTGCCACCACCAGGGACATTTGGCAATGTCTGGAGGCATTTTTGGTTGTCACAACTATCACATTTTTAGT
TGTACATGATACTGGCATCTTGTTGGTAGAGGCCAGGAATTCTGCTAAAAATCCTACAATGCACAGGACAGCCTCCCAC
GCAAAGAGTTATTGGGCCCAAAATGTCAATAGTGCTGAAGTTGAGAAACCCTGGTTTCGATGAAAGAAAATAATTGCTA
ATGTCTTACTAATTTTATGTACATTTTCAGAATATTCTTAGACATCTTAAATATTTAGAAAATAAACTATTATTTTCTT
TTAAAATAATTTCAGAGTTTTAAAATAATATTTTAAAAAATACAGTGAATGGAAAACATTTGATCATGAGATGTAATAA
AATTAGATAAAATATTTTCTTCCAAGATTATACTTTAAAAGTTCACAAGTATCTAAGACTCTCCCTTGACACATTGTAA
CACATTTTGAAGCTTCATTTTGTTTTCCATTTAAATTCTAGAGATTTCTTATTTGTTTATACTTTTAATTCATATCATT
GTAGAATAGTAATATTATCTATATTGTCTGATTTTCCAGGCTGTGTTTACAGATTTGGAGATTCTTGCAGCAATTTTTG
CCAGTGCAATACATGATGTAGATCATCCTGGTGTGTCCAATCAATTTCTGATCAATACAAGTAAGTAAACTTTATTTTT
TCAGAACACATTTTTCCCTTGTACATTTTAGAATGACTAAGGGTCTTTATAAACTCAGAGTCTTCCAGAGCCATAATGT
TCTTTTGAGATGTGTATATATGTGTTTTAGTGATAGTTCATGTTAATGTAATTTAACTGAAAATTATCATTATATCCCT
TGAGGCATGTGATATTTGAAAAATGTGTTCCAGTTCTCTTTAAAAGTAATATATTGCTGTGTTACTAGACAAGGGTAAT
TAAAAATGAAAGTGTGCAGAAAGATTTAGAAAGTTGTATTGGCCCTAAAGTTTTAAATTAAAAAAAAAGTTATGAGAAT
TAATGGTAAGTGTTCCTCACTTTATGTAGGTCATCATTTAATCCTCTTCAGAGGCCATAGCTTCCCTTCCTCCTCCATG
CCCAACCCCTGTTCTTTCCTTTTAAAATCTTCTAATAAGGGTAACAGGAACTTCTTAATATTYTTTCAACCATTTGGT
TTTTTCTCACTGTTAACATCTCACCTTATAAGAAGTCATCACTGAATTTGGAAATATAAGGAATAGTAGAGACTGTTTA
ATATGGAGCATCTCTGACATTGCCGCACAGAAAGCCTGTGTAGGGAATGTTTAGGTAATGCTTGAGCTATCCCTTGGTA
AAGAGATTTAGGTTTATAGAAATTCTATTTGGTACTTGAAGTTAATTGGTAAGTGATTTAAGTGAACTATGACTTAATT
CCCTCCCATATGGTAGATTATAAATTATGGTAGATTATAAAATCATAAATTCACTTTTATATATAAAAAATATGCAAAG
TTGTTGAAAATGTTGTATGCTTAAGAATCCACCTTTCTTTCATTTTTGCTTGAGGCTATGAATAATAGTCTTCTCGTGC
CTATAGCAATCTAGCTATAGAATTATTTATGAATTCACCATTCATTTCCTGTACTTTGCTGTAGCCAGATTTAAAGAAG
GAATGTAGAGGTAACCTTGCTTTGAGAGATTTAATTCAGAGCTTTAGGATTATTTACCTATTTTTATATCTTATAATGG
CCTCTGGACTATCCTATAGCAAAATATACTCTAATGACTCATCCATGTAGAGGACTGGAAAAGTCAGGGATTTCCTGAG
ATGTGTGGTTAGTCAAGTATTTTTTTACAAGTTTAGTTTAGGAACTTATTTATCCAGATTAGACAGGATAACATTTCAT
GTTCTACCTACCTATGAGCACCTATAATGAGGTACTTTTAGAACTCATCAAAGCATACATACAAATATTAATATACATT

Fig. 9.341

GGATGCAGCTCCCTGCATTTACATGGTATCAGTGGGGAGGTATCAGTGGGGAGGGTTCATTATGTCCTTTCTAAGAAGA
GCAGGGAGGTCATGCAATACAGTGCATGCTGGCACTTTACATGAGCCTGGCCTGATTTATTTGATGCTTATGAATGTC
TTGAGATATTCTGAATTTTATCAATTTTTAGTAAATACATAAAATGTATTTTTACATAAAATTTTTGTGTTAAAGGTAT
ATATATATATCTATCTTAAACACCAAACATTCAAACTGGTATGTTTTCTTTGCATTCTGTTATATAGCATATTATATGT
TCCCTTAGAATTAAGAGTAGATTTAGAAGACAAATTAAAACAACTGATAGAAAGGTCACTGTCTTCCAAGTACTCTGAT
ACATTTTTTAAGGGTAATGAGGACCTGCTCTATTCTTCATTCTTTTGAGCCCTTAAAGCAGCAGTCTCCAATGTTTTTG
GCACCAGGCACCAGGTTTTATGGAAGACAATTTTTCCATAAACTGGGGGCGCAGGGAGAGAATGGTTTTGGGATGAAAC
TGTTCCATCTCAGATCATCAGGCATTAGTTAGATTCTCATAAGGAACGCACAACCTAGATCCCTTGCATGAGCAGTTCA
CAGTAGGGTTCACGCTCCTAGGAGAATCTAATGTCCCTGCTGATCTGACAGGAGGCGGAGCTCAGGCAGTACTGATGCG
GGCTTGCCTGCTGCTCACCTCCTGCTGTGCAGCCCAGTTCCTGACAGGCCACGGACCGATATTGGTCCACAGCCGATGG
ATGGATCGGGGACCCCTGCTTTAAAGGGCACTTGGGCTTTGACTGGCACCTGGAGGACCCTGGCATCAGGGTCCCTGTG
CAGTCTGCCATTTAAGCTAACAAGGCCTCAGTCTACAGATGAATCTGATACTCTAAAGTTTGAGAACCAATGAAATAGT
GGAGGAAACTGAAGAAGATAATTTTATCTCCTTAGGATGTCTGTTTAAAGTCATTTTGCTGGTGACCTGCCTGGGATGG
AAGGATAACTAATCCTGCCGCTGCAAATTCTTTCTTTGTTATTTAGTAATATTGCAATGATCTCCTTTCTGTGTGACCA
CAGCGACATAGGGAAGTTCACAGTTGCCAGAGTAGCTTTGGATTGCTAAAGTTTTTTTGACGATGAGGTGTGATGAGGC
TGTGTTATTCCTGAGGGAATGAATCAGCATTGTCACTTTGTACAGGAAAGTATCCCAGGGTTGTTCCGGGCCCCCAGGGC
ATTATCAAAATTACAGCCTTAGTTAGTTTGGTTTGGCTAGGGATCATGTAAGAGAATTATCTTCCCAGCATGCAGTAAA
GGAATCCTTCTAATAACTTGTAAACTTGTGATATGTAGCTTCGTGAAATATTTTATCAAAATTTGTGCTTATTTTTAGT
TTGCAGTAAACCTTTTTTAAAATTTGACTTTTTATATTTTATGGATGGCTTGAGCATCCATGTGTCAAGCCAGCACATT
CTCAGCTCTTGCCTCAGAGCTGGAGCTGCCATCCTGTCCAAAGCCTGCAGCTGAATCCATATTTCTCATAATAAAGAAT
TCTAAAGACCTCTGATTATCAAATTTATAAACCCATAGTTGGTTACTTGTCTTACTTTAAGGAAGCTACGGAAGCACTG
AGAGCTTAAGGCACATGGGGGGCGCTGGGGATTCCCTTGGCTGGTTCCCAGGGCAGTTAATCCTCCTGCTTCTTACATG
TGCTCTTCGTTTTTCTTAATTATTTCAGTTGTTTTAGCTTTAGGTGCCAAATGATTTTATACTAATTGTATTTACACTC
GTTGAAAGCATGCTGGAGGTTCTGCAAGCAGAGAGAACAATTCTACCTGGTAGAGTTGGTTAAGCTATAATAAATGATT
TGAGTGTGGGTACTGTGAACAGGATTTAGAGAAATTGAAATTTCAGGCAGGAAGCTGCGTAAATATTTTTAAAGGATGA
TGCATATAAATAAATCCATAGGCCAGGTGCAGTGGCTCACTCCTATAATCCCAGCACTTTGGGAGGTCAAGATGGGTGA
ATCACTGACGTCAGGAGTTCGGAGACCAGCCTGGCCAACAAGGTGAAACCCTGTCTTTACAAAAAAAAAATACAAAAAAA
TTAGCCAGGTGTGGTGGCGCATGCCTGTATTCCCAGCCACTCAGGTGGCTGAGGCAGGAGAATTGCTTGAACCTGGGAG
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TTTGAAATTAAAATTTTCATAGCTACACTAGTAGATTGTATGTAGAATTTTATTTTTCTGTATAAACCCACACCTTCAA
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TGCAAGCCTACTAAATGTTATAATAAATATTATTTCAGGCACTTAGGACACATGGSTGGACAAGACAAGACAAATCCCT
GGCTCTTAAGAGCTGGCATTCTGCTAGAAAAGGTGGAGCATAATAAGTGAATTTATGGCATGTGATGGTACTAAGTGCT
ATGGAGGAAAATAATGCAGGGTGAGGGCATAGAGAGTGGAGTGATGAATGAGGCAGTTTTCTTGACAACTGAATATTAA
GTTAAAACCACCACTTCCCTCTGTCATTTCATGGAGAAATGTTTGTTTCTGAAGTCCTTTTGAAGATTTATGTTTATTT
CAGTTGTAACTTAGAGACATGGTGTAGCATGCTGTCATTTTCTAACTAACTCAAGGCTAAGCCTAGTAAAGCTGTAAGA
ACAGTGAGTGTAAGTCTTACTTACAGGATACATATCTATAGTGTCTGCCCCAGTCTTAACTGTTTCAGCTCCAGGTCTT
AATATTGGCTCTGATCTGCCATGTGGACTCCATCATAAGACACAAAAAGGCACAATACCTAGTGGACTTAGTTGGATTT
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GGGCACAGAACAAGAGAGTGTCACAAAAACTGCTAGTTTTGAGTGGGGCTCTACAACAGGTCCAGCCTGCTGTGCAAGC
TGCTCTGCACATGGGCCACATGATCCAGCAGATTTAATGGTGCTTGAAATGTCAGTGGCAGATAGGAATGTTGTTTGGA
GCCTTTGACAGAGCCCTCTGTGTGAATCACAGCACAGACTCTGGAGCAAGACCCTGCCATCATCCAAAGAAAGATAACT
AACTACTCTCCTTTTGAAAGAAAGATATAGGCCTGCTGCTGGGCCTTAGGAGATACTGACTGACTATGGGCCACCAAGT
TTCCATGTGGTTTAAGCTGTCTGCCCATCATTAATAGGGTATTATCTAACGCGCCAAGCCATATGTTGGGCATGTACGA
CATTTCATCATCAAATAAAAGTAGTGTAATACACGATCTATCAGGTCCGAGCAGACACTAAAGGCACAAATTACATAAA
GAAGTGGCCCTAATGCCACTCCTATTAATTACACTGCCTTCTTTCTCCCAGCCTACACATGTGGTCGCATGGAAAGTTC
CCTGCAAGTAGTTGACAGAGGGCCTGGTTTACGGATGGTTCTGCGTGATACGCAGGTACCACCGGAAGTATACAGCTGC
AGCACTACTGCCCCTCTCTGGGACATCTCTGAAGGATGGTGGTGAAGGGGAGTCTTTCCAGTGGGAAGAACTTTAGGCA
AGGTGACTCGTTGTTCACTTTGCTTGGAAGAGGGAATGGCCATATGTGCAATTATATACCAGTTCATGGGCCGTAGCCA
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GTGAATGATCTCTCTGAATGGACAAAAAAGGAATGCTCACCAAAGTGTGACCTTGGCAGAGGAGGATTTTAATAACCAA
GTGAATAGGATGACCCATTCTGTAGATACTAGTCAACTTGGTTCCCTAGCCACCCCTGTCATCACCCAACATGCTAAGA
ACAAAGTGGCCATGGTGGCAGGGATGGAGGTGGCAGGATGTGCTTAGAAACATGGACTTCCACTCACCAAGGCTGACCT
GGCTATGACTATTGCTAAGTGCGCAATCCACCAGCAGCATAAACCAACACTGAACCCCCATATAACACCATTTGGGGG
GATCAGCCAGCTACCTGATGGCTGGTTGATTACATTGGACCACTTCCATGGTGGAAAGGGTAGCATTTTGTCCTTAGTG
GAAAAGGCACTTTCTCTGGAAACAGATGTGCCTTCCCTGCAGTTTTTCTGCCAAAACTATGGTATTCCATACAGCATTG
CCTCTAACCAGGAACTCACCTTACTGGCAAAGAAGAGCTGCACTGGGCTCATGCCCATGGAAGTCCCTAGTCTTACCAT

Fig. 9.342

ATTCCCTAACATCCTGAATCAGCTGGCTTGATAAATTGGTAGAATGGCCTTTTGAAGACTCAGTTACTCAGCTAGGAGG
CAAGACCTTGCAGGGCTGGGGCAAGGTTCTCCAGAAGGCCATAAAGGCCATATATGCTCTGAATCAGCATCCAATATGT
GGTGCTATTTCTCGCATAACCAGAATTCATGGGTCCAGGAATCATTGGATAGAAATGGGACTGTTACGACTCATAATTA
CCCCCAGTGACCCACTAGCAAAGTTTGCTTCCTGTTCCTGCAAATTTATGTGCTGCTAGCTAGAGGTCTTAGTTTCAGA
AGGAGGAATGCTTCTATCAGGAGACACAACAGTGATTCCGTTGAACTGGAAGTTAAGACCTAGCCACTTTGAGCTCCTT
ATGCATCTGATTCAATCATCCAAGAAGGGCATTACAGTGTTGACTGGGGTGACTGATCCTGACTACCAAGGGGAAATTG
GGTTACTACTCCACAATGAAGGTAAGGAAGAGTATGTGTGGAATAAGGAGATCCCTTAGGGCATCCCTTAGTATTAACC
ATGCCCTGTAATTAAGGTCAGCACAAAATAACCCAATCCAGGCAGGACCACTAATAACCCATACCCTTCACGAATGAAG
GTTTCGGTCACCCCACCAGGTAAAGAATCATGACCAGCTGAGGTGCTTGCTGAGGGAAAAGGGAATACAGAATGAGTAG
TAAAAGAAGGTAATTACAAATACCAGCTATGACCATATGACCAGTTATAGAAATAAGGACTATAATTGTCATGAGTATT
TTCTTATGAATGCATTTATATGTATATATACATATATTAAGCATATATCTTCATTTTCTTTTTCTTATTCCCTTATATA
ACATAAGAGGTATTAACTTATCTTCATTTTCTTTTTCTTATTCCCTTATATAACATAAGAGGTATTAACTTTATATTAG
TATTTAAGTATTTATTTTATATCATAGTATTTAAGTTATAGGCTATCAGGATAAGAGTAAACATTACTCAAAAACTTTA
CTTTCACTTCTGGGGAATGTGTTAGTGTGCTTTTAGTTGTATGCAGGATAGTTGTAGCCTGTTTGGTAGAATTATGGCC
TTATGGAGATTAAATATGGTTAAAGGAGATGCTTATGGGTACCAGGGTGACAAGGGGCAGAATTTGTAATGGTTAATTT
TATGTGTCAGCTTGACTAGGCTAAGGGATGCCCAGATAGCTGGTAAAACACTATTTGGGGTGCGTCTGTGAGAGTGTT
CCTGGAAGAGATTAGATTAGCATTTGAATTGGTAGACTGATTAAAGAAGATTGCCCTTACCATTGTTGGCAGGGATCAG
TCAATCCATTGAGGACCTCAAAGAGAAGAACAAAAACATTGGGGAAGGGGCAAATTTTGCTTTCTTCGGAGCCTGGAC
ATACATATTCTCCTGCCTCTAACATCAGGGTTCCTGGTTGATTCTCTGGCCTTTGGACTTGCTTTCCTGGTTCACCTTT
GCAGACATGGGACTTCTTGGACTCCATAATTGCCTGAGCCAATTCCTATAATAAATAAATGTGTCTTTTTCTCACATAC
ACACACACACTCATACATATGTCTATTCTATTTCTCTGGAGAACCATGATTAATACAGAGAGAGAAAAGATTAGCACAG
ATGAAGTACATGTTCTCAGTTATGTGGTAGTACCTGCCCACCCTTCCCCCCATTTCATTAGCACTCAGAAGAGAGGGAC
ACAAAAGTGGTCTTCCTGCCTTCAGTAGTAGCATATGTTGGGCATAATTTAATTTATTCTTGATGATCCAGGGTAGTTG
TAACAAATGAGCACAATTGATCTATATATAATAAAATGATGGCTTTGAGTTTGTAAAGGTATGCATGGCCTCTCAATAA
AAAATAAATACTTACAAAGTTGTCTTTATAAATGTGTGCCAGGCACTGAGTGGACTGTGTTGATTTCCTGGTTCATGTT
TAGTGTTCACTGCTCAGGTTTTCACCTCTATAAGGTACTTGTAATCATAGTCAGTATAAGGTGAGGGCTCTAGAAACTG
CCTGGTTTTAAGTGCTGGCCCCAGCACTTACTGGCTAGGTGATGTTGGCAAAGTTACCTACCTTCTCTGAGGTACATTT
TCTTCATTTGTACAGGATTATATGAGTATGTCTATGTAAATATTTATGTGTATAAAAGATGTCCCCAAGGGACATTTTC
TATCCCCCAGCCTATCCCAAGGACACAAAGACTTACTTCCCACCTATATGGCTCCATGCCATCCATGAATGGAACATAG
CCTTAAAATGTCGATAACAACAGTATCTTCCTAAAAGAGTTATGAGGATTAAATGAGATGATTCACATAAACCATTTAA
CACAATGGCACCTAAATCCTCTAAATGTTGTGCCTTGCTGTATTCCTGTTTGTACTTTGTAAGTTTGAAATAATTGAAG
TGCCTAGGGGAAGCCAGATAACCAAACATATTAAATTAATAACCTTTAATATTTTGTAGGGGCTTAAGTCTCTAAGTAG
GTTGGGAGGGTTTGGGGAGGAACGATTAAAAGATTTGTAGAGATAAAGACAAAAAAGGTAGAATGCGATACATGCTAAA
TGGGTGGTACAAAGTAGTATAGAAGTTTACAGGAGAAAGTGGGCAGTTTCATCTGGTAATTAAGAAAGACTTGATGGAA
GAGGTAACTTATATTGGGCTTGAAGATGAAAGGGTTTCAACAAAAATGTTATATAAGCTAACCTCTTTGCCCCTCTGTG
CTGTGCACTGTACCATCCTGACAGCAACTTTCTGATCATTCCTGAACCTTCAAGGACTCTACTTACAAGTAATGGATTA
GTGTCTTTGATGAAAATCTGCTGAGGAGCTGCAGACTCCTACCTCCCAATTTAAATGTGACCATATGCCTTCAGTCCTA
AAGAAGAGTAGAAAGTTAAATAACTTCCTTGAGATTCAGTTTCTTAAATGCTAACATTTGTTCATTTAAAAATCAACAG
TCACCACCACTTTCCTGTAACAGCATCTGAGATGGAAGAGGCTATGGAGGCCTGCCAGTCCACTAAGGCATCCTTTCCT
GGCTTTTCTAGCCAATCTGGACTCTTTAAGTGTCAGGAGATAACCACTCTCCAAGACAGGCCTTGCCAGTATTCTTGGA
CATCTGCCCTACATGAAAGGCCCTACTTATATCCAGTAGAACTCAGACTCTTTGTTGCACCTTCCATACAACAGATCAC
CCTTTTCCTTGAAGGAAGAGCTCATCATCTTATTCTTTTGCAGGGTCAACAGCCTTAATTTCCTTCACCTTCAGCTTCA
TATAAGCCAATTAGGGTTTTTGTAAGGCTAAGTCAATTCTGTTAACACTGCTTGTCTACATGCATATTTCCTTCCTTAA
ACGAACTCTAATAATTATCCAGTATCTAATAATTATGCCTTCCTTTCAATATATGTTTGTTTATTTGATTCCACTGTAG
AAATACAATAATATGTGCTAAGAACCTATATAGTTTTAAATTTTTCATTTCTATATGCTTACCTATCTGTAGATAAAGG
TTCATAAAGGCATTTATAGACACTATAAAAGTTCACCAGAAACTGCCTTTTAAAAGATAAACACTATTGTTTTATCTAA
AGAAAACAAAAAATAACAAAAAAATACTGTACAAACCTACTCCCTACTAGTCTAAACAGCTCTGCTCCTGTAGTTTGGG
AGCAGAAATTTAAGTGTGCAAATTTGTATTTCTATAGTTCCGATAAAATAATAGAATTTCTCAGTTGAAAATGTCTTAA
GCCTCTCCTCTCCTTCCTAGCTCCATTAAAATAGCCATTGAATAGTATTGGGTATTTCTTTCTTAAAAAAAGATATATA
TTTCCAAATATATTTTCTATGCATTCGTTATATATTTTCTATGCATTCGTTAGAAAAAAGATCAAATACCTGTGCTTTT
AACCTTTTTCTTTTCTTTTCTTTTCTTTTTGAAACAGAGTCTTGCTCTGTTGCCTAGTTTGGAGTGCAGTGGCACGATA
TAATGGCTCACTGCAGCCTTGAACTCCTGGGCTCAAGCAATCCTCCTACCTCAGCATCCCAAGTAGCTGGGACTACAGG
CACGCCCTACCATCCCCAGATAATTTTTTATTATTTGTCGAGATGAGGTCTCCCTATGTTGACCAGGCTGGTCTTGAAC
TCCTGGGCTTAAGCAATCCTCCTGCCTCGGATTTGCTTTTAGTCTTTACAGTGATTAAGTGGAAAGAGAATAAAGCATC
AAAAGTTTTTTAATGATTATCTTGTAGCTCTGGGTCTGCTATTTACAAGAAGTAGGAGAGAGGCAGAATCTCTCCCTGC
CTAAAATTCACAGGTCTAGGGCAGTAGGGAGAGAGTGGCAGAATCTTCACCAGAGGGTATACAGACAGCCAAACACAAC
ATCACTGTGAAGCTGTGAGCAAGCAGGCAGGAAGAGCAATATCCCTGTACAGTATACAATGACTGCCACGATACTTGGA
AAAGAAAATGGAAAACAATGAATAAAGCTTGGACTTTCAGAGCTATACATGAGCAAATGAGCAAATCTAAACTTGTTCA
TATGATTCCTTATTGTTCTTGTACCCTCTTTGAGTACAAACAATCCTGTAACACAGGATCCTCACTTTATATAGTGCAG
GGTAGGTAATTCACAGTTATCAGGAATACAAAACCTTATGCTCTGGATGTGTTATAGATACTAAGAATAATGTCATATT
CTGCTGAGCTCATGGCAACTCTAGAGGAGAGGTTAAAGATCCAATTCTTTCACTTTAGAGAAAGCTGAGACCTACAGAG

Fig. 9.343

TGAAATGACCTGCCACATGTTAGTAGCATTAGAATTCACTCCCCAAGATTCATTCCAGTGTTGTTCCTGCTCTTATGTT
ATCTGATTTATTCTCTCCTGGATATTGTCAGGTAATGATAAGGGCAGCAGAGAAGTTTAGGGGAAATTACATCCTAAAT
CCAGAATTTTAAGAATCAGATAAACTTCTCACAAACAGTTTTGCTGATCTTTGGCCTTTTGTCTTTTTTACAGACTCTG
AACTTGCCTTGATGTACAATGATTCCTCAGTCTTAGAGAACCATCATTTGGCTGTGGGCTTTAAATTGCTTCAGGAAGA
AAACTGTGACATTTTCCAGAATTTGACCAAAAAACAAAGACAATCTTTAAGGAAAATGGTCATTGACATCGTAAGTAGC
TGATAAAAGCCAAAGAAGAGAACTGTGATGCAAGTTGTTTATAATTTAGACATAAGAACAAGATGAGTATTAGGTAAAA
GGAACTGCATTTCAAAACATATTATGGCCCTTTATGTTATAGAAGCTGCCCGTGATGCTGGCTGTGATGTTCTGTAATA
GGTTTTTCACTTCTAGCAGTTTGGACTTGAGAATAATGTCAGCTCACCCTCATCATTTATTTCTGGCCCCTCCAGTC
TGGTGGCGGGCAGAGAAAAATGACTAACAAAAGCAGATTGTGTGGGCCACAGCTCAAATGGATTTTTTCCCCACCTTTT
CTCATCAGTAGACAGTGCCATTTAGACATCCATGACTTTACTCTTTTTTCTATGCATCTTATTCAGTGATTATGAGACA
CAGGAAAATCTCTAGCTTTCAAAAACTTATAAACTTGTGATGATGTCTTATCCATGGAGATGTCACCCATTTTTCACCA
TGAAAGTGGTTGTCAGTGCCTAGCATTTCTGTATATTACACACATTTATCTGGGCTTTGGGAAAACTTGATAGCAAAGG
GGAAAAGACTCTGCCCCCAAGGAGTAGTAAGGATTTTCCACTGTCATTAAAAGGCATAGTGTTGTTTTATTCCTTTTTC
ATTCTTATATTCTGCGTAATATTTTCATGTGTAAATTCTGTTTTCTCTGAACTTAATAATATACTCTATATTTTAAGGT
ACTTGCAACAGATATGTCAAAACACATGAATCTACTGGCTGATTTGAAGACTATGGTTGAAACTAAGAAAGTGACAAGC
TCTGGAGTTCTTCTTCTTGATAATTATTCCGATAGGATTCAGGTAAAGCCTTGTTTGAGTTTGCTCTGTGTGTGTGTGT
CTGTGCACATGTGCACATGTCTGCGTGTTCAGCTTTGATAAGATGTATTTCTTCCTTCTCCCACCTTATACTTTCAGCA
ATTGTAGGCAGGATTTTTATCCAAATTTTTATTCCTGAGAATTAACCAGGTAAAATTCTACTGGTCTTTCTGTTTGCAT
CTACATTAATTAAAAAAACTAACAAACAAACACCCCACAGAACCAGCCACTTAAGCAGCTCTGAATCTAGTCAGCCATG
CACATAAACAGTTTCTCTTAAGCTATTTAGATGCAGTAGAAGTGGCATAATTTGGAACTATTAATACAAGTGTGAACTA
TACACAGACACATCATGGTTGAGCTGTTTGGAATAAATCTTACACTACGTGTATTTTTAAGTGTYGCAGTCATCCAATG
TGAATTTCTAGTTTTTTTTGTTTTTTTTTTAAAAAAAAAGGAACAGGAGTGAATAGAGAATGCATCCATCTATTTTAGG
TTCTTCAGAATATGGTGCACTGTGCAGATCTGAGCAACCCAACAAAGCCTCTCCAGCTGTACCGCCAGTGGACGGACCG
GATAATGGAGGAGTTCTTCCGCCAAGGAGACCGAGAGAGGGAACGTGGCATGGAGATAAGCCCCATGTGTGACAAGCAC
AATGCTTCCGTGGAAAAATCACAGGTAATGCATGAAGTGTATAGCTTTCAGAGAGAACAGAGCTACCGCTTTAGCATTT
GGTTACTTTGTATTACATATGATAGTATTTTACTGGATTTTTAAAATTACTTTGTTTTTGACAAGCTCAATTTCACCTT
AGTATTTATGATCCAAAGAACTTTCATTCTTATGACTTACATTCATATAGTCATATATATATTCTAAAGACATATTCAT
TTATTATGACTATATTCATTTAATATATTCATATACATAGAGCACATGGCATTATTTCAGTTATCTGGATTCACCTACA
AATTGGTGATTGTAAAATAAGCCCTACCATGTCAACAACTGGAAAATTTTTTATGCTATAGAACATGCTCTTTAACCAA
AGGTTCTAGAAGCTAATTTTGACCAGCTAGTAGCAATACTTTACTTTAAATGGTCTGTTGTTGTTGAAAATAGTGACAA
TTTTACCAAACTAAGTTTAGTAGTCTTCTGTTCAGTGTTTTATTTGTGGGCCATGATCTAATTAAGCTTTTCCATTGTT
TCTTAGTCCCAAGTCCTCTACTCATACTGGATTTTTTTCTTAACTAGGTGGGCTTCATAGACTATATTGTTCATCCCCT
CTGGGAGACATGGGCAGACCTCGTCCACCCTGACGCCCAGGATATTTTGGACACTTTGGAGGACAATCGTGAATGGTAC
CAGAGCACAATCCCTCAGAGCCCCTCTCCTGCACCTGATGACCCAGAGGAGGGCCGGCAGGGTCAAACTGAGAAATTCC
AGTTTGAACTAACTTTAGAGGAAGATGGTGAGTCAGACACGGAAAAGGACAGTGGCAGTCAAGTGGAAGAAGACACTAG
CTGCAGTGACTCCAAGACTCTTTGTACTCAAGACTCAGAGTCTACTGAAATTCCCCTTGATGAACAGGTTGAAGAGGAG
GCAGTAGGGGAAGAAGAGGAAAGCCAGCCTGAAGCCTGTGTCATAGATGATCGTTCTCCTGACACGTAACAGTGCAAAA
ACTTTCATGCCTTTTTTTTTTTTAAGTAGAAAAATTGTTTCCAAAGTGCATGTCACATGCCACAACCACGGTCACACCT
CACTGTCATCTGCCAGGACGTTTGTTGAACAAAACTGACCTTGACTACTCAGTCCAGCGCTCAGGAATATCGTAACCAG
TTTTTTCACCTCCATGTCATCCGAGCAAGGTGGACATCTTCACGAACAGCGTTTTTAACAAGATTTCAGCTTGGTAGAG
CTGACAAAGCAGATAAAATCTACTCCAAATTATTTTCAAGAGAGTGTGACTCATCAGGCAGCCCAAAAGTTTATTGGAC
TTGGGGTTTCTATTCCTTTTTATTTGTTTGCAATATTTTCAGAAGAAAGGCATTGCACAGAGTGAACTTAATGGACGAA
GCAACAAATATGTCAAGAACAGGACATAGCACGAATCTGTTACCAGTAGGAGGAGGATGAGCCACAGAAATTGCATAAT
TTTCTAATTTCAAGTCTTCCTGATACATGACTGAATAGTGTGGTTCAGTGAGCTGCACTGACCTCTACATTTTGTATGA
TATGTAAAACAGATTTTTTGTAGAGCTTACTTTTATTATTAAATGTATTGAGGTATTATATTTAAAAAAAACTATGTTC
AGAACTTCATCTGCCACTGGTTATTTTTTTCTAAGGAGTAACTTGCAAGTTTTCAGTACAAATCTGTGCTACACTGGAT
AAAAATCTAATTTATGAATTTTACTTGCACCTTATAGTTCATAGCAATTAACTGATTTGTAGTGATTCATTGTTTGTTT
TATATACCAATGACTTCCATATTTTAAAAGAGAAAAACAACTTTATGTTGCAGGAAACCCTTTTTGTAAGTCTTTATTA
TTTACTTTGCATTTTGTTTCACTCTTTCCAGATAAGCAGAGTTGCTCTTCACCAGTGTTTTTCTTCATGTGCAAAGTGA
CTATTTGTTCTATAATACTTTTATGTGTGTTATATCAAATGTGTCTTAAGCTTCATGCAAACTCAGTCATCAGTTCGTG
TTGTCTGAAGCAAGTGGGAGATATATAAATACCCAGTAGCTAAAATGGTCAGTCTTTTTTAGATGTTTTCCTACTTAGT
ATCTCCTAATAACGTTTTGCTGTGTCACTAGATGTTCATTTCACAAGTGCATGTCTTTCTAATAATCCACACATTTCAT
GCTCTAATAATCCACACATTTCATGCTCATTTTTATTGTTTTTACAGCCAGTTATAGTAAGAAAAAGGTTTTTCCCCTT
GTGCTGCTTTATAATTTAGCGTGTGTCTGAACCTTATCCATGTTTGCTAGATGAGGTCTTGTCAAATATATCACTACCA
TTGTCACCGGTGAAAAGAAACAGGTAGTTAAGTTAGGGTTAACATTCATTTCAACCACGAGGTTGTATATCATGACTAG
CTTTTACTCTTGGTTTACAGAGAAAAGTTAAACAGCCAACTAGGCAGTTTTTAAGAATATTAACAATATATTAACAAAC
ACCAATACAACTAATCCTATTTGGTTTTAATGATTTCACCATGGGATTAAGAACTATATCAGGAACATCCCTGAGAAAC
GGTTTTAAGTGTAGCAACTACTCTTCCTTAATGGACAGCCACATAACGTGTAGGAAGTCCTTTATCACTTATCCTCGAT
CCATAAGCATATCTTGCAGAGGGGAACTACTTCTTTAAACACATGGAGGGAAAGAAGATGATGCCACTGGCACCAGAGG
GTTAGTACTGTGATGCATCCTAAARTATTTATTATATTGGTAAAAATTCTGGTTAAATAAAAAATTAGAGATCACTCTT
GGCTGATTTCAGCACCAGGAACTGTATTACAGTTTTAGAGATTAATTCCTAGTGTTTACCTGATTATAGCAGTTGGCAT

Fig. 9.344

CATGGGGCATTTAATTCTGACTTTATCCCCACGTCAGCCTTAATAAAGTCTTCTTTACCTTCTCTATGAAGACTTTAAA
GCCCAAATAATCATTTTTCACATTGATATTCAAGAATTGAGATAGATAGAAGCCAAAGTGGGTATCTGACAAGTGGAAA
ATCAAACGTTTAAGAAGAATTACAACTCTGAAAAGCATTTATATGTGGAACTTCTCAAGGAGCCTCCTGGGGACTGGAA
AGTAAGTCATCAGCCAGGCAAATGACTCATGCTGAAGAGAGTCCCCATTTCAGTCCCCTGAGATCTAGCTGATGCTTAG
ATCCTTTGAAATAAAAATTATGTCTTTATAACTCTGATCTTTTACATAAAGCAGAAGAGGAATCAACTAGTTAATTGCA
AGGTTTCTACTCTGTTTCCTCTGTAAAGATCAGATGGTAATCTTTCAAATAAGAAAAAAATAAAGACGTATGTTTGACC
AAGTAGTTTCACAAGAATATTTGGGAACTTGTTTCTTTTAATTTTATTTGTCCCTGAGTGAAGTCTAGAAAGAAAGGTA
AAGAGTCTAGAGTTTATTCCTCTTTCCAAAACATTCTCATTCCTCTCCTCCCTACACTTAGTATTTCCCCCACAGAGTG
CCTAGAATCTTAATAATGAATAAAATAAAAAGCAGCAATATGTCATTAACAAATCCAGACCTGAAAGGGTAAAGGGTTT
ATAACTGCACTAATAAAGAGAGGCTCTTTTTTTTTCTTCCAGTTTGTTGGTTTTAATGGTACCGTGTTGTAAAGATAC
CCACTAATGGACAATCAAATTGCAGAAAAGGCTCAATATCCAAGAGACAGGGACTAATGCACTGTACAATCTGCTTATC
CTTGCCCTTCTCTCTTGCCAAAGTGTGCTTCAGAAATATATACTGCTTTAAAAAGAATAAAAGAATATCCTTTTACAA
GTGGCTTTACATTTCCTAAAATGCCATAAGAAAATGCAATATCTGGGTACTGTATGGGAAAAAAATGTCCAAGTTTGT
GTAAAACCAGTGCATTTCAGCTTGCAAGTTACTGAACACAATAATGCTGTTTTAATTTGTTTTATATCAGTTAAAATT
CACAATAATGTAGATAGAACAAATTACAGACAAGGAAAGAAAAAACTTGAATGAAATGGATTTTACAGAAAGCTTTATG
ATAATTTTTGAATGCATTATTTATTTTTTGTGCCATGCATTTTTTTCTCACCAAATGACCTTACCTGTAATACAGTCT
TGTTTGTCTGTTTACAACCATGTATTTATTGCAATGTACATACTGTAATGTTAATTGTAAATTATCTGTTCTTATTAAA
ACATCATCCCATGATGGGATGGTGTTGATATATTTGGAAACTCTTGGTGAGAGAATGAATGGTGTGTATACATACTCTG
TACATTTTTCTTTTCTCCTGTAATATAGTCTTGTCACCTTAGAGCTTGTTTATGGAAGATTCAAGAAAACTATAAAATA
CTTAAAGATATATAAATTTAAAAAAACATAGCTGCAGGTCTTTGGTCCCAGGGCTGTGCCTTAACTTTAACCAATATTT
TCTTCTGTTTTGCTGCATTTGAAAGGTAACAGTGGAGCTAGGGCTGGGCATTTTACATCCAGGCTTTTAATTGATTAGA
ATTCTGCCAATAGGTGGATTTTACAAAACCACAGACAACCTCTGAAAGATTCTGAGACCCTTTTGAGACAGAAGCTCTT
AAGTACTTCTTGCCAGGGAGCAGCACTGCATGTGTGATGGTTGTTTGCCATCTGTTGATCAGGAACTACTTCAGCTACT
TGCATTTGATTATTTCCTTTTTTTTTTTTTTTTTAACTCGGAAACACAACTGGGGAAATATATTCTTTCCCAGTGATTAT
AAACAATCTTTTTCTTTTTTTTAAGTCCTTTTGGCTTCTAGAGCTCATAGGAAAATGGACTTGATTTGAAATTGGAGCC
AGAGTTTACTCGTGTTGGTTATCTATTCATCAGCTTCCTGACATGTTAAGAGAATACATTAAAGAGAAAATACTGTTTT
TTAATCCTAAAATTTTTCTTCCACTAAGATAAACCAAATGTCCTTACATATATGTAAACCCATCTATTTAAACGCAAAG
GTGGGTTGATGTCAGTTTACATAGCAGAAAGCATTCACTATCCTCTAAGATTTGTTTCTGCAAAACTTTCATTGCTTTA
GAATTTTAAAATTTCACCTTGTACAATGGCCAGCCCCTAAAGCAGGAAACATTTATAATGGATTATATGGAAACATCCT
CCCAGTACTTGCCCAGCCCTTGAATCATGTGGCTTTTCAGTGAAAGGAAAGATTCTTTTTCTAGGAAAAATGAGCCTAT
TTTATTTTATTTTATTTTATTTTTTGACACAAACTGTAGATTTTAGCAGCCCTGGCCCAAAGGAATTTGATTACTTTTG
TTTTAAACAGTACAAAGGGGACACTATAATTACAAAAACATCCTTAACTGATTTGAGTTGTTTTTATTTCTTTGGATAT
ATTTTCAGAGTGGTAAATTGTGTGTGAGAATTACAAATGATTATTCTTTTAGTGGTTTCTTAGCCTCTCTTACAGCCCA
CGGGGATAGTACTGTACATCAATACCTTCATATGAAATTTTTATATGCAATGAAAATAAAAGCATGGGTTGATTCTGCC
TATTTATGACTCAATCTTTTACAAATAAAAGATTATTCATTTTAAATTATAGTTCAATCAGCATGTCTCTTAGGATACT
GAACGTGGTTGAAATGAAAGGATAGTGACATCATAAGTTAGTACTGATATTCATAACCAAATAAAGCCAACTTGAGTAA
TTTTGCTACATTAAAAATTACCAAAATTACTTAGATGGCCTATAAGATTAAGCATGGTGTTTTCTAAGCAAGCTTTGAA
AGGGGCCTTCCATACTTACTTAATTGAATATTCTGGGATATTGAAAATTATTCAGATACTTGACAATTATTTTTGGTTA
CCTACTCCGCAAACTACAAAGTTTTAAGGACTCAACAATAAGTTAATGAGACACAGTGTTTGCTTTCATGGAGCTTACA
GTCTGGAGGGGACAAAGGCTTAAACAATACTCATATAATTATATATGTGATCAGTACAATGAAGGAGCTCAGTGGGGTA
AATAAGCAGGAACCTGAACTTGATCTGTTCCGGAGGGCCACAGAAGGCTTCCTTGAGGCYTTGAGAAAGTGATTTGCAT
CTGAGTTCTGAAGGATTGTAAGAGGTAACTAGGGAAAAAGTTGACAGGAAGAGGAAGGGGATCCAGACAAGAAACATTT
GCAAAGATCTTGAGGCATAAATGAGCTTGAGACATCTGGAGAAACTGAGGAAAAGTGAGAGAGTAGGCAGGGCCTGGAG
CCGCAGAGCCATTGCTAACCATCCTGTGTGAGATATCCCCCATTCTGTAGCTTTATTCTCATAACCCTGCTCAATTTTC
TTTATAACACTTCTCACAGATTTATATACGTGTTTGTTTTTGTTATCTGTCTCTCCCACCAGACCACAGCTCCATGAGA
GCAAGGTCTTTGCTTACCAATATATCACTAGCACTTAAAACTATGCCTGGTACACAGTAGGTTCTTAATATGTGTTGAA
TATAGCCATCAAATTGATATTGGATATAATTCAATCTGATAAGATATTTTGAGATATTAAAGAGTTTTTAACTTGATAC
CATAAAAACTTTGTTTGTTTTTTGTTTTTGAGCTTACTAAGATCCTGGATAAAGAGTTTAGAGTTTCCTATCTCTTTGC
TAACTAAAAACTCTGTTTGCTTATTCCTCACAAATTCTACTTTTTTCTAAATGACAATCCATTTGTCATGATAATGAGA
GTAAAGAAATCAGCACAAATTTAATCCCCAGATCATCCCCAGACCATGCCAGCAGAATAAGGGTAATTAAACAGAGCAT
CTATGCTTAGCCTCTCCACCATTTCTCCTGCCACAACAGTCCTGACAGCCAACAGGTGCCAAATTTGTGCCTTCCTGGG
AATAACTGTTTTAAACTCAAGCTCCCTTCCCCAAAGCCATGACCCCAAAGTGACACTATGGAACTAAGGAAGCAACTCC
CTTCTTTTCCTGACTTGCCACGCTTGCTGATTTAGGCTAATTTGGGTGGTGGTGGGCCTGAACTCACATTAAAATCTCT
GACCTGGAAACCTTTCCTCAGGCACACGGCTTTGGACCCACAACAGCAACATTCCACCAAAAAACAAACCAAAACCAAA
AACATTCCCTGTTGCTAGAGAGTACCACCTGTCTACCAAGGGGAAAACAACCTTGTGTCAGGGGAATCATACCAGGGCT
TTCCCATCCTTCTGATTTGGGTCCTGCATCCCACCCAGCTACTCCGAGAGCTCCAAATACTCTAGGTCAAACTCAGTGC
TATGGGTATAAATCTTGAATTTGTACACATAGGAAATACTACTTTATTTCCTTTAAATCAATTAATCTGGACTCGGGGC
TCCAGCCAATCACACTATTGGAAATTCCCATCTCTCATTACTGCCACAGCTCCTCTCTCTCCCAACATAAAATTTATCT
TATCTCCAATATAATCTGAGTATCAGGCCTCTGTGTTGTTCCAGCAGAGGTTCCTTACAGTCCCTCAGCTATTAGCTTC
CTGGTCACATGTGGTGTACCAGGAATATATGCTGGTTTGGGGCCCTGCTTCCACACAGTGTGTGCATCAAAAGAGCCTA
TCCTTCTGGTGTTTTATTACACCTTGCTGTGGTCTGAATGTCTGTGTTGAAATGCTAACCCCTAGGTGATGCTATTAGG

Fig. 9.345

AGATGGGGGCCCTTTGGGAGATAATTAGGTTATGAAGGCAGAGTCCTCATGAATGGGATCAGCGCCCTTATAAAAGAGG
CCCAAGGGACCTTGTTCAACCTGGCCACCATGTGAGGACTCAGCTAGAAGGTGCCATCTGTGAAAATGAAAGCAGGTCC
TCACCAGGCACCAAATCTGCCAGAACCTTGATGTTGGACTTCCCAGCCTCTAGACTGTGAGAAGTAAGTGTGTTGTTTA
TAAGCCACCCACTTTATGGTATTTTCTTATAGAAGTCTAAGGAGACTAAGACATACCTACTGAAATTACTACAAAAAAA
AGCAGTTCTCTTCTTTTCCTAATTCTCAACATATTCTCCTTCTTCTCTCTCCTTCCTTCTTTTGCTCTCCAATGAGATC
AGGCTTAAAACCAAAAACGAAACAGACTAGAGGTAGTTCTGACTTCCATTTGCTTCTGCTCTCCACTCTGCAAAAACCC
TGGCTATTATTTGAAATATGGAGACGAAAAAAGATATTGGAAGAGCATACATTAAATAATAGTCCATTAACCTTCCACA
CATGGTTGGCAACATCTAGATCCAACAATGTTCACTGAACATTTTGAGATGTGGGAAGTTGAGGAAGTTGTCTCCAAGA
GGAAGTCATCAGGAACTCCCATACTTCCTATGTGGGAACACAGGGAAAGAGGCATTTTTTCCTGAAGTCTCTGTGTTCC
AGTGCTATCCCTGAATGTCTATTCCCAGCTCTCGCTTAGCTGTTTCAATGACAAGATATAGCACTTGAAAATTTTATAA
AGTGAGAGTCATATTTGCTCCCTGCTGCAAGCCCCCACCCTGCCATTCCAGGACCCTGCTATGGTCCACAATTGGCATT
ATGATTCCCTCTATTTTGCAGCTATGAAAAGTGAGGCCCAAGAAGGTTAATTGACTTGGCTAAGATTATTCACAGGCTA
AATACTGAGATTAATGATTTGCAAACTACAGATTTGACAGAAGTCCTAATGCTATCTCTACATCCTATTTCTGTTGAGG
ACCAAAATTGACTGTTGCATTGCCTTTGATTTCCTTTGACCATCCTTCATTACAGATTTCAGTAATTTTTATGGTCCAA
AGCTAGGTGACAGATATTACATCATATGCATTTGTTAACTCACCCTATGTCTGCATAGCCTTGCTATATGGTCAGAATT
CTCCAGATTGACTGGGGAACTTGGAGTTAAAGAGCCCCTGACCCCCTAAAAAATTATAGAAAATGAAAGAAGCTGTCAA
GAAAGTAAGGAGCAGAGATAAGAGCAGAGATGGGAGYGTGCCTCTGCCCGGCAGAGACTCACAACATGAGGCAAGACAG
ATCTTAGCTGAACTTCTTGCAGGATGTATGCCTCAATGAAAGGAATGGAGCACGGGCAGCATCCGGCTTAGGCTGGAGC
CCCTTCAACCATCATGGCTGTTTTAGCAGGGTGTTTGCCAGCTGCTTACAAATCCCAAGCCAACAGACATGGTTTCAGG
ACCTGAATCATGCAAACATATTTTCTGAAAGGTTCTATCACCTGAGAATTGCTTTTCCTTCGCTCCTTGTTTTTGAACC
AAAAAGCCGACCAAATGTATAGTGGCAAACACTTGCTCAGCACCCATCCATGCAAGGCACTGTTTTACCACCAGGCTGC
ATCAGTTAGAGAACCAAGCCGTCTCTCACCTTGCAGCTTCTTCACACTTTGCTCATTTTCTCTCTAACACTGATGGTTT
CTGTTTCCTGCTATTCAGTTACAGCATCTGGGAAGAGAGTGGCAGAGAACGCCAGGCAACTGCACCCTGCCACAGTGGG
TCAAGCGGAGGCTGGGTGGTGACACCCGTCTCTACCCAGCAGAAGTCAGTGGTTCATGGGTGGAGAACAAAGCTCAGGA
CAGCTGCTGCAGTCCAGGGAACTGTCCACCATAGAAGACTCTTGGGAAGCAGCCCCTGACCCCAACCCCCTGTGCTTTT
TGAAGCCGTGTCTGGTATCACATGGAATTATGCAGTAGTCATAGAATATCTTTGAAAACTTATATTCTAAAAATAATTG
CTGAGATCAGCGATTAAAATATCTAATAAATGGACTGGAAAAGTTGAAAACAAGCAAAGGTGAGAGAAAACAATTGAGG
AAAACTGGGAGAAAGTGAAGGAAGTTGGACCCTTTGTACTACAGCATCCAAGGACAGTGATGATATCTTCTGTTCCCCA
CAGGACCCAGGTTCCTGGGTGCTTAACGTAACACATAAGGCCCTTAAGGATCTAATCAAACTAAATCATCCCCAACTCC
TCCCATCAACCCCACATAGATATCCCTGTGCCTCAGCTAAATGCTGCCTTTACACCTTGCCTTTACATCTCTCTGCCTG
GAAAACAGCTCATCCCTCTTGATCCAGTTTAAATACACCTTTGTCTGGAAAGCCTTTCCCATTAGTATTTTATACACAA
CCCTATAATAAATATTTCCCCTAATATGTTGTATTTTTTAAAAAAATTCTTTCTCTCACTAGATTGTGAGATTTTTAAT
TTTTATTTTTTTAGACAGTCTCACTCTGTCACCTAGGCTGAAATACAGTGGCGCAATGTTGGCTCACTGCAATCTCTGC
CTCCTGAGTTCAAGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCTGGGATTACAGGCATGCATCACCACGTCCAGCTAA
TTTTGTAATTTTTTAGTAGAGATGGGGTTTCGCTATGTTGGCCAGGCTGGTCTCGAATCCTGACCTCAGGTGATCCGC
CCACCTTGGCCTACCAAAGTGCTAGGATTACAGGCGTGAGCSACCACGCCTGGCCTAGATAGTGCAATTTTTAAACATC
AATGTATTCCTTTTTGCCTGCTAGTAAGGAATTAAGTCCGGATATTAACATTTGACTATTCTTTCCCCTCTAACACCAA
CTCTTCTCAAAATGTGGTCCTTGAGCTGACATTAACGTCAACTAGGATCTTGTTAGATTATAATCTAGCCCCAGACCAA
GGCTCCAGGAAAAGACTCTCTAGGGGTGGACCCTAGAACCTGTGTTTTAACAAGGACTCCAGGTGATAAGTATGCTCCA
TAAAGTTTGAGAAACACTGTTCAAGACATCATGGAGGTGTTTTTCTATTTCTGTTTTTTTTAAGAAGCAAGTTAATAAT
CTCAACCACCTTTCTAATGTATTTCATTTAATCAAAGGGATACTTGTTGCTACAGGAGTTACAACAGATGACCTAGTGA
GGGCCACAGGCAGTCTGAGGAACAGTAGGATCCCATGTTTGGCCAATGTCTATCAAGCAAGAAAGGAATAGTGAAGCCA
GCTATTAGCTCCCTTCAGCAGAGGAAACCTGGGATTAGGAGTCGCCATCAGGCATCATGGCATCACAAGCAGGCATGGG
TTRAAGATTTAAATGTTGCAAAAAGAGAGAAGAACCAGAAGGAAATTACGTCCACATTATCCCTGCAAGACCATTAATG
TAATGAACAGAAATCAAACACCTTTTCAGTCTTCAAGTGCCGCATTCAGGTTCACTCTGCTAATCACACAGCTGAGTGG
CCCTCTGCTTTCATAACTGGGTGAAACCACACATCCCACCCCAAGATGGCTTGGGATCTACCATCACAAGGGGCCACCA
AAGGGCCAAATAACACAACCCCGAAATTCAGTGGTGGTAACTCTCCATGGGGTTAACTTTGATTACTGGGAAACTAGAA
ATGGGAAGGAGCCAGTAAATTAATTTCTTCTCTCCCAAGACTATTCTGAGGCATAGCCTCCCCCTTGAAGCCCATCAGG
ATGATCCTGCAGTTCCATGTCAGCAAGAGCGCCCTACCAAGTGACCTGCAGTGTCTCTTGGCTGCTCCTTGTGAGTCAG
TAGCCAGCAGAGAAATGTTTTCCCTACTTTCCTTTATTTCTTTGTTCTTACTTGCTTCATTTTGCCTTGACCTTTTTTT
CCTCACCCCTACTACCCAAAGGCATGTACTTCCCAAATAAAGTCTGTCACTCTGATCCCTCCCTCAGACTGTTTCCAGG
GATGCTGAGCACCCTGTACATTCAGAAAAGCAGATGTCAAATTTCTGTATATATATTGGAGTGCACTAAGTATTTAAAA
TCAACCTTTGGCTATTAGAGGTAGGGACTGTGCCTTATGCATCATTGTTTTTCCAGGGCTTAGTTCAGTGTCTGCCATA
TAGCAAGTATTCATTTAACAGGAAAAGAGAAAGACAAGTGGGTAAGTAATTGCCTGAATGAATGAGGTTGATGGTGAAG
AATGGGTGGGAAGGGCATGAATTGGCCTAGAATAGATTAGACATTAAGTAAGCAGGAGTCGAGACAGTTAAGGGGCCAA
AGGCAGCTGAAAAGAATATGGAACAGGAATACAAGTTGAAGGAATCAGGCATTCTCCCTAGAAACAAAGGGTACGGGAA
GGGTAAGAGACAGACACTTCACTGTCTGGGAATTTTCATCCATACTCGTTATTAAAGACACACTTGGTTGCCTACTTAA
TTATTACCAACCCTCCACCCCCACTTTATTCCTGGCATACATAAGTGGGATTTTGTTCAGGTCGTGTGAAGTCAAGTCT
TCCAGGGAGATCCAGCCTCTCCTCAGTTCTGTAGGCTAATTCTGAGCCTTTTATGGTAATTCCTCTACCCTTGCCAGTG
ATTAGGTTAGGACAGGCTTGCCGTGCTGCAATAGTAGACAGTGAGACACAGGTTGACTTCTGGGAAAATATCCCCAACT
CTTACAAAGAAAAGAGAGAACAGAACATTTTTTCTTCGGGGCTTTGGAAATTATTTTCAAAGATGTCATGGTTAGGCTA

Fig. 9.346

TTATCTTGAGGCCACGAAAGGAACTATCTGAATACACAGACAACATACTGAAAATGGCAAAGCAGAAGTTAGATAGCAC
ATGAGTCTTTGAAGATGTGTTTGAGCTGCTGAACTAATCAGCCCTACTTTGAAACTTATTAAGATAATAACTAGTTATT
ATTTAAGCCATTTTAGTTGAACCTGCTATTATTTGCCCCTGAAACAATCCTAACTAATATACTGTTAGTCCATTTGTAT
CGTTATAAAGGAATACCTGATGCTGGGTAATTTATAAAGAAAGGAGGTTTATTTGGCTCAGAGTTCTTCAGGCTGTACA
GGAAGCATGCACGGCTCTACAGCTGCCTGGCTTCTGGTGAGGCCTCAGGAAGCTTTAACTCATGGCAGAAACAAGGGGA
GCTGGCGTATCACATAGTGGGAGGAGGTGGCAAGTAGGCAGGGAGGAGGTGCCATGCTGTTAAACAACCAGCTCCTTCA
TGAATAGAGTGAAAACTTATACATTACTGCAAGGACAGCACCAAGTGGATCATGAAGGATCGTGACCCAAACACTTCCC
AATAGGCCCCACCTTGAATATTGGGGGATCAATTTCAACATGAGACTTGGAGAATACAAATATCCAAACTATATCATAC
ACCCACTCTTTGTTCCAACAATGTGCTGGTGAGTCTGGGCTGGGARTGGGGGAGAAAGGTACCTGGCACAGTGGAAATG
TTGGAAATTTGACCCCAAATTAGCTGGGTGACCTTAGGCATGTTAATTCATCTCTACTTTCTTTCATTTTAAATAGGGG
AATTATAATATTGGAATCTTCTCTACATTCTTCACAGTATTAGAGCAAATGAATTTATAAATGTAAACTCAGTGTAAAC
TTTAGATAAAATTTTTCAAACACTAAGCTTGTGACCCAGAGTAGATAATAAAGTCAAAAGATGGTTGCCATGAGCACTA
ACCGTGAATTAAAATAGAATAGAGAATATCACTGTGTGCTGCACATAAGTTTCATTTTCTGAAATTGCTTCATTTACAT
GCATGCATGGGTGCACTTGTGTGCTTGCACACACATGCAAATGTTGCCAAGTAAACTATTTTTAAAAGCATACGAAGCA
TGGATTTAGAACAAAGTCAACACCAGAGACAACTAGAGGAACCTAAGTCTCTCACCAACCCCCACCCCTGCCAATTTAC
CTGTCATCCATGATTCAAAAATGGTTTCTAAAGGGAAATAAAAATTGATTCAAAAGGGAGACCTAATGAGTAACATAAT
AGGGAGCCATTGATTGTTTTAGAGTGGTATGACGGAGCAGTGGGTAAGTAGATCACTCAACACTGGTATTTCAGACTGC
CAAGAGAGGAGAAAACAGACACAAAGTGATTTCTGGGCTTTTGACAACTTTTTTTTTCTCAAAGTAGATTGACAATATT
ATGTGTCATCTTATATATATTAATAGACAAAGGCAATATCTACACTTGGGAATACTTCATGGAAGGCTTGGCTGGAAAC
TAAAAACTGGACTATAAACTTCTTGGGGGTTAGATACGTATCTTAAGACTTCCTTGTGTCTTGAATTGTGCCTAGCCTA
GTGCTGCATAGATATGTAAGCCACTCATTCTTGTGCAATTACCTATTGTAGAATTTTCAGACTAATATATTTCCTTTTC
CTTGTTTTGATCCTCTGCTGAATCATGAGAATAGTTCTCAGGTGAACAGCAGTGATGTACAGTGTCTCACTGGAAAAGC
AGGAAAATAATCAGATGTACCCCAGAACCTTAGGATATGGGAGGCTCTTCTACTGGCCACTCCATGGGAAACTCGCTTG
CTTTGGGGGACAGTTTGCTTTGCTCTATTTTGTGGCACAGGGTTTTGCCTTATTTTTCTACTCCCTTATTCCCAGCAA
ACATCCTAAAAAGATGTGGGTAAAAGAAAAAGAGAATAAATTTTGCAATTCTACTCACTGGCTAGAAACAGACAGAGAC
ACATGAGTAGAGGCGGAGTTTACCATCACCCTTAATCATCCTGGGGCCCATGTGTGTATAAAAGGCAAGAAAAGAGCCA
TTACCAGGAGGCACTCACCTTCACAGTTTCCACCGCATAATTCCACCCCTCTGTATCAAACTACCCAAATTGCTACACC
AATCACAACTGCCCTCTTGTTCAAAGAAAATAATATCATGGATTTCTTTCCTGGCAGTTCTGCTATTGATTGTTTTTGT
TCTTTTAATAAGCAAGGTGAGAAGGTTAGAAAAAAATTATTCAGATAATTCACCTGGGAGTAGGGTAGGAACTTGAGGC
ATGCAGAGAGAATGGCAAATTCAAAATCAACTAAGCCATAACTGCCTATCCTACTGACCACTGTGCCAGGTACCTCAAA
AGAGTAGGACTTGATTCTTCCTTTTGAGGAGGTTTCAGTTTGGTTGGAAAGGAATGGGGGAGGGGCCAAGTACAGTGGC
TCACACCTGTAATAGCAGCACTTTGGGAGGCCGAGGTGGGTGAATTGCTTGAGCCCAGGCATTTGAAACCAGCCTGGGC
AACATGGCAAGACCCCACATCTACAAAAAATACAAAAATTAGCTAAGCATGATGGTGTGCACCTGTAGTCCCAGCTACT
CGGGAGGATGAGGTGGGAGAATCACTTGAGCCCAGGAGGTTGAGGCTACAGTGAGCTGTGAACATGCTTCTGTGCTCCA
GTCTGGACTACAGAGCAAGACTCTGCCTCAGATAATAAAAAAATAAAAAAGGAAAAAAAAAAAAGAAATGGGGAATGGA
AGAGGAAGGAATCCAGGGGAAGAATGATCACTAAGACTGCATCACACCTTTTGCTATCTCATTTCAACTCTACATCAAC
CCAATATTCCCTTCATTTAACAGAGAGGTCAAAAGAGGCTGGAAGGATAAGGTTGTCCAGTAAAAATGTCAAGGCTGAT
ATGGGAACATAGCCAGTTTGTCTCTAAAGTGCCCTGTGTCCCTTGGGGAAGAGAATATTTAACTTGATTGTTGCTTCAG
TTTTTTATTCTATGTCAGCTATCAGTTTGCAAGGCATTATTTAGGGGATTTCCTTTACTTTCTTTTTTTTTAAATCTCA
AATTTCCCTCTCATTTAGTAACTGTAATTTCAGTGCCTAACATGTAGGACAAAATACTTTCCATATTTTTTTTTCAAAA
TTTTTGCACTGACTGTAGTCCCCTCACTGGAACAGCTTTATTTCCCTAAATAATATACAATGAACTTGTTCATATCGAA
GACGTATGCCAATATTAAATACAAACAGCTCAGCTGGGCGTGGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGACT
GAGGCAGGTGGATCACCTGAGGTCAGGAGTTCAAGACCAGCCTGGCTAACATGGAGAAACCCTGTCTCTAATAAAAATA
CAAAAATTACCCAGGTGTGGTGGCACATGCCTGTAATCCCAGCTACTCAGGAGGCTGAGGCAGGAGAATCACTTGAACC
CAGGAGGTGGAGGCTGCAGTGATCCGAGATTGTGCCACTGCACTCCAGCCTGGGTGACAGAGCAAGACTCTATCTCAAA
AAAAAAAAAAAAAAAAAAAAAGGTGGCTGACCAGATGGCCAAAAGGAACAGCTCCAGTCTGCAGCTCCCAGCAAGATCA
ATGCAAAAGGTGGGTGATTTTTGCATTTCCAACTGAGGTACCCAGCTTATCTCATTGGGACTGGTTAGACAGTGGGTGC
AGCGCATGGAGGGCGAGCCGAAGGAGGGTGGGCCATTGCCTCACCCAGGAAGTGCAAGGGGTCAAGGAATTCCCTCCCC
TAGCCAAGGGAAGCCATGTGGGACTGTGCCTTGAAGAACAGTRCACTTCGGCCCAGACTACACTTTTCCCACAGTCTTC
GCAACCCACAGACCAGGAAGTTCCCTTGGGTGACTATGCCACCAGGGCCCTGGGTATCAAGCACAAAACTGGGCAGCTG
TTTGGGCAGACACCAAGCTAGCTGCAAGAGTATTTTTCATACCCCAGTGGCACCTGGAATGCCAGCGAGACAGAACAGT
TCATTCCCCTGGAAAGGGGGCTGAAGCCAGGGATCCAAGTGGTCTAGCTCAGCGGACCCCAACCCCACAGAGCCCAGCA
AGCTAAGATTCACTGGCTTGAAATTCTCACTGCCACCACAGCAGTCTGAAGTCAACCTGGGGCACTCGGGCTTGGTGGG
GGGAGGGGTGTCTGCCATTACTGAAGCTTGAGTAGACTGTTTTCCCCTCACAGTGTAAACAAAGCCAAGGGGAAGTTCC
AACTTGGTGGATCCCTCCGCAGCTCAGCAAAGCCATTGAAGCCAGACTGCCTCTCTAGATTGCTCCTCTCTGAGCAGGA
CATCTCTGAAAAAAAAGGCAGCAGCCCCAGTCAGGGACTTATAGATAAAAACCCCCATCTCCCTGGACAGAGCACCCA
GGGGAAGCAGCGGTGGGCACAGCTTCAGCAGACTTAAACATCCCTGCCTGCTGGGTCTGAAGAGAGCAGCAGATCTCCC
AGGACAGCGTTCAAGCTCTGTTAAGGGTCAGACTGCCTCCTCAAGTGGGTCCCTAACCCCCATTGTAGCCTGACTGGGA
GACACCACCCAGCAAGGGTTGACAGACACCTCATAGAGGAGACCTCTCGCTGGCATCTGGCGGGTGACCCTCAGGGACA
AAGCTTCCAGAGGAAGGAGCAGGCAGCAATTTTTGCTGTTCTGCAGCCTCCGCTGGTGATATAGGTAAACAGGGTCTGG
AGTGGGCCTCCAGCAAACTCCAGCAGACCTGCAGAAGAGGGGCCTGACTGTTAGAAGCAAAACTAACAAACAGAAAGGA

Fig. 9.347

ACAGCAATGACATCAACCAAAAGGATGTCCACACAAAAACTCCATTCGAAGCTTACCAACATCAAAGACCCAAGGTAGA
TAAATCCATGAAGATGAGAAAAAAATCAATGCACAAAGGCTGAAAATTCCAAAAACCAGAATGCCTCTTCTCCTCCAAA
GGAACAGAACTCCTCAACAGCAAGGGAACAAAACTGGATGGAGAATGAGTTTGACGAATTGATAGAAGTAGGCTTTAGA
AGGTGGGTAATAACAAACTCCTCTGAGCTAAAGGAGCATGTTCTAACCCAATGCAAGGAAGCCAAGAACGTTGAAAAAA
GGTTAGATGAATTGCTAACTGGAATAACCAGTTTAAAGAAGAACATAAATGACCTGATGGAGCTGAAAAACACAGCATG
GGAACTTTGTGAAGCATATGCAAGTATCAATAGCCAAATAGATCAAACCAAAGAAAGGATATCAGAGATTGAAGATCAA
CTTACTGAAATAAAGCATGAAGACAAGATTAGAGAAAAAAGAAGGAAAGGAAACAAAGCCTCCAAGAAATATGAGACTA
TGCGAAAAGAACAAACCTACATTTGACTGGTGTACCTAAAAGTGATGGGGAGAATGGAACCAAAAGTTGGAAAACACTC
TTCAGGATATTATCCAAGAGAACTTCCACAACCTAGCAAGTCAGGCCAACATTCAAATTCAGGAAATTCAGAGAACACC
ACAAAGATACTCCTTGAGAAGAGCAACCCTAAGACACATAATCGTCACATTCACCAATGTTGAAATGAAGAAAAAAATG
TTAAGGGCAACCAGAGAGAGAAAGGTTAGGTTACCCACAAAGGAAAGCCCATCAGACTAACAGTGGATCTCTCTGCAGAAA
CCCTACAAGACAGAAGAGAGTGGGGGCCAATATTCAACTTTCTTAAAGAAAAGAATTTTCAACCCAGAATTTCATATCC
AGCCAAACTAAGCTTCAAAAGTGAAGAAGAAATAAAATCCTTTACAGACAAGCAAATGCTGAGAGATTTTGTCACCACC
AGGCTTGCCTTACAAGAGCTCCTAAAGGAAGCACTAAACATGGAAAGGAAAAACCAGTACCAGCCACTGCAAAAACATA
CCAAATTGTAAAGACCATCAACACTATGAAGAAACTGCATCAACAGGCAAAATAACCAGCTAGCATCATAATGACAGAA
TCAAATTCACACATAACAATATTAACCTTACATGTAAATGGACTAAATGCCCCAATTAAAAGAAACAGACTGGCAAATT
AGATAGAGTCAAGAAGCAACGGTGTGCTGTATTCAGGAGACCGATCTCACGTGCAAAGACACACATAGACTCAAAATAA
AGGATTGGAGGAATATTTACCAAGTAAATGGAAAGCAAAAAAAGCAGGGGTTGCAATCCTAATATCTGATAAAACAGAC
TTTAAACCAACAAAGATCAAAAAAGACAAAGAAGGGCTTTACATAATGGTAAAGGGATTGATGCAACAAAAAGAGCTAA
CTATGCTAACTCTCCTAAATATATATGCACCCAATACAGGACCACCCAGATTCAAAAGGCAAGTTATTAGAGACCCACA
AAGAGACTTCAACTCCCATACAATAATAGTGGGAGACTTTAACGACCCACTGTCAATATTAGACAGATCAATGGGACAG
AAAATTAATAAGGATATTCAGGACTTGAACTCAGTTCTGGACCAAGCAGACCTAATAGACATCTACAGAACTCTCCACC
CCAAATTCATAGAATATACATTCTTCTCAGCACCACATCACACTTATYCTAAAATTGACCAACAGAATTGGAAGTAAAA
TACTCCTCAGCAAATGCAAAAGAATGGAAATCATAACAAACAGTATCTCAAACCACAGTGCATCAAATTAGAACTCAGG
ATTAAGAAACTGACCCAAAACTGCACAACTACATGGAAATTGAACAACCTACTCCTGAATGACTACTGGGTAAATAATA
AAATTAAGGCAGAAAATAAGTTCTTTGAAACCAATGAGAACAAAGGCACAACATACCAGAATCTCTGGTACATACCCAA
AATAGTGTTTAAAGGGAAATTTATAGCACTGAATGGCCACAAGAGAAAGCAGGAAAGATCTAAAATCGACACCCTAACA
TCACAATGAAAAGAACTAGAGAAGCGAGAGCAAACACATTCAAAAGCTAACAGAAGACAAGAAATAACTAAGATCAGAG
CAGAACTGAAGTAAACGGAGACACGAAAAATCCTTCAAAAAAAAAAAATCAATGAACCCACGAGCTGGTTTTTTGAAAA
GATCAACAAAATAGACCACTAGCCAGACTAATAAAGAAGAAAAACAGAGAAGAATCAAATAGACACAATAAAAAATGATA
AAGGGGATATCACCACTGGTCCCACAGAAATATAAACTACCATCAGAGAATACTATAAACACCTCTCTGCAAATAAATT
AGAAAATCTAAAAGAAATGGATAAATTCCTGGACACATACATACACCCTCCCAAATCTAAATCAGGAAGAAGTTGAATC
CCTGAAGAGACCAATAACAAGTTCTGAAATTGAGACAGCAATTAATAGCCTACCAACCAGAAAAAGTCCAGGACCAAAC
AGATTCACAACAGAATTCTACTTGAGGTACAAAGAGCTGGTACCATTCCTTCTGAAACTATTCCAAACAATAGAAAAAG
AGGGACTCCTACCTAACTCAATTTATGAGGCCAGCATCTTCCTGATACCACAACCTGGCAGAGACACACACACACACAC
AAAAGAAAATTTCAGGCCAATATCCCTGGTGAACATTGATGCGAAAATCCTCAATAAAATACTGGCAAACCAAATCCAG
CAGCACATCAAAAACCTTATCCACCATGATCAAGTAGGCTTCATCTCTGGGATGCAAGGCTAGTTCAACATATGCAAAT
CAATAAACATAATCCATCATATAAACAGAACCAATGACAAAAACCGCATGATTATCTCAACAGATGCAGAAAAAGCCTT
CGATAAAATTCAACACCCCTTCACGCTAAAAACTCTCAATAAACTAGGTATTGATGGAAGGTATCTCAAAATAATAAGA
GCTATTTATGACAAACCCACAGCCAATGTCATACTGAATGGGCAAAAGCTGGAAGCTTTCCCTTTGAAAACCAGAACAA
GACAAGGATACCCTCTCTCTCTATTCCTATTCAACACAGTATTGGAAGTTCTGGCCAGGGCAATCAGGCAAGAGAAAGA
AATAAAGGGTATTCAGATAGGAAGAGAGGAAGTCATATTGTCTCTGTTTGCAGATGACATGATTGTATATTTAGAAAAC
TCATCATCTCAGCCCAAAATCTCCTTAAGCTGATAAGCAACTTCAGCAAAGTCTCAGGATACAAAATCAATGTGCAAAA
ATCACAAACATCCCTATACACCAGTAACAGACAAACAGCCAAATCATGTGTGAACTCTCATTCATAATTGCTACGAAGA
GAATAAAATACCTAGGAATACAACTTACAAGGGATGTGAAGGACCTCCTCAAGGAGAACTACAAACCACTGCTCAAGGA
AATAAGAGAGGACACAAATGGAAAAGCATTCCATRCTCATGGATAGGACGAATCAATATCATGAAAATGGCAAAATGGC
CATACTGCCCAAAGTTATTTATAGATTCAATGCTATCCCCATCAAGCTACCGTTGACTTTCTTCACAGAATTAGAAAAA
ACTACTTTAAACTTCATATGGAACCAAAAAAGAGTCTGTATAGCCAAGAAAATCCTAAGCAAAAAAAATTAAAGCTGGA
GGCATCACATTACCTGACTTCAAACTATACTACAAGGCTACAGTAACAAATATAGCATGATACTGGTACCAAAACAGAG
ATATAGACCAATGGAACAGAACAGAGGCCTCAGAAATCACACCACCCATCTACAACCATCTGATCTTTCACAAACCTGA
GAAAAACAAGCAATGGGGAAAGGATTCCCTATTTAATAAATGGTGTTAGGAAAACTGGCTAGTCATATGCAGAAAACTG
AAAATGGACACCTTCCTTATACCTTATGCAAAAATTAACTCAGGATGGATTAAAGACTTAAATGTAAGACCTAAAACCA
TAAAAACTCTAGAAGAAAACCTAGGCAATACCATTCAGGACATAGGCATGGGCAAAGATTTCATGACTAAAACACCAAA
AGCAATGGCAACAAAAGCCAAAATTTACAAATGGGATCTAATTAAACTAAAGAGCTTCTGCACAGCAAAAGAAACTATC
ATCAGAGTGAACAGGCAACCTACAGTGGGAGAAAAGTTTTGCAATCTATTCACCTGACAAAGGGCTACTATCCAGAATC
TACAAAGAAATTAAACAAGTTTGCAAGGTAAAAAACAACCTCATCAAAAAGTGGGTGAAGGATAAAAACAGACACTTCT
CAAAGAAGACATTTATGGAGCCAACAAACATATGAAAAAAAGCTCTTCATCACTGGTCATTAGAGAAATGCAAATCAAA
ACCACAACGAGATACCATCTCATGCCAGTTAGAATAATGATCATTAAAAAGTCAGGAAACAACAGATGCTGGAGAGGAT
GTGGAGAAACAGGAACACTTTTACACTGTTGGTGGGAGTGTAAATTAGTTAAACCATTGTGCAAGACAGTGTGGCAATT
CCTCAAGGATCTAGAACAAGAAATACCATTTGACCCAGCAATCCCATAACTGGGTATATACCCAAAGGATTATAAATCA
TTCAACTATAAAGACACATGCACACGTATGTTTATTGCAGCACTGTTCACAATAGCAAAGACTTGGAACCAACACAAAT

Fig. 9.348

GCCCACCAAGGATAGACTGGATAAAGAAAATGTGGCACATATACACCATGGAATACTATGCAGCCATAAAAAGGATGAG
TTCATGTCCTTTGCAGGGACATGGATGAAGCTGGAAACCATCATTCTCAGCAAACACAAGAACAGAAAACCAAACACTG
CATATTCTCACTCATATGTGGGAGTTGAACAATGAGAACACATGGACACAGGGAGGGGAACATCACACACTGGGGACTG
TCGAGGGGTGGGGGGCTGTGGGAGGGATAGCATTAAGGAGAAATACCTAATATAGATGATGGGTTGATGTGTGTAGCAA
ACCACCATGGCATGTGTATACCTATGTAACAAACCTGCACGTTCTGCACATGTATCTCAGAACTTAAAGTATAATAAAA
ACTCAAACAGCTCTACATTGTTATTTATTTAAAACTTCAATTTACTTGCTAAGAATTATCTTTTTTTTTTCATTCTCTC
TTCACTTCTCTCACCAGCAATGGCATTTGGGTTTTTTAAGGCCACTTTAAAAGACATTGAAAATAATACCTGTTTGTT
TTCATTCTATTATTCTTATTACATTCATTTGTCTTTGAATGTTCCCAAGTTTTCTGGTATGACACTACGAATCTAAGTT
ATTCCAGACTTCTCTATTCTTTCATGTATTTAGAATACATTTTTCAAAATTCCTAGGCTGAGGTATTAATAACTTGCCC
AAATTACCTTTCAAAATGTATTTACCATCCCTGTATTACTCAGTACAAAAATTTGATTTTTTGGAGACATATTTGTACA
TATTTATGGGATACATGTAGTATTTTGTTACATGCACAGAACATGTAATGATCAAGTCAGGCTATTTGGGCTATTCATC
ACCTCCATTATTGATTATACCTATATGTTGAGAACATCTTAAGTCCTCTTTTATAGTAAGTTTGAAACATATAATACTA
TACTATAGTCACCCTACTCTGTTATTGCATATTAGAATTTTTTCCTTCTGTGTGTTTGTACCCATTAACCAACCTCTAC
TTCATTCACCCCCCACCACCCACACACCCTTCCAATCCTCTGGTGTCTATCATTCTATTCTCTACTTCCATAAGATCCA
CTTTTTTAGCTCTTACATATGAGTGAGAACATGTGATATTCTTCTTTCTGTGACTGGCTTATGTCACTTAAGATAATGA
CCCTTCAGTTCTATCCAAGTTGCTGTAAATGCCATCATGTTAGTCTTGTTTATGGCTGAATAGTATTCCATTGTGTATA
TATATATATTCTTTAACCATTCATCCATGATGGATACTTACGTTGATTCCTTATCTTTGCAATTGTGAATGGTGCTGCA
ATAAACATGGGCTGCAGGTATTCCTTTGATATATTAATTTCCTTTCCTTTGGATAAATACTAGTTAGATTACTGGACTG
TATGGTAGCTGTTTTTAGTTTTTTGAGAAATCTCCATACTGTTTTCCAAAATGGCTGTACTAGTTTACATTCCCACCAA
CTCCCACCAACAAGAATTCCCTTTTTTCTGCATCCTCACCAGCATCTATATTTCGTCTTCATCTTCTCCTTCTCCTTCT
TTGACAGGGTCTTGCTCTGTTGCCTGTTTCCCAGGCTGAAGAACAGTGGTGATTCACAGGTGCAATCAGGATGCACTGC
AGCCTTGAACTCCTAGCCTTAAGCAATACTCCTGCCTCAGCCTCATGCGTAGCTGAGACTACAGGCATCAGACTTTTGT
CTTTTTAGTAATAGTCATTTTAACTGGAGTATGATGCTATCTCATTGTGATTTTAATTTGCAGTTTCCCGATGATTACT
GATGTTGAGCATTTTTTAATATGCCCATTTGTCTTTTTTTGAGAAATATCTATTCATGTCCTTTGCCCATTTTTCTTCT
TAGGCAGAGTCTCATTCTGTTGCTCAAACTGGAGTGCAGTGGTGAAATCGTGGCTCACAGCAACTTCTGCCTCCTAGGC
TCAAGCAATTCTCCTGCCTCCCCTCCCCAGTGGCTGGGATTACAGGCGCCCACCACCATGCCCAGCTAATTTTTGTATT
TTAGTAGAGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTCAAACTTCTGGTTTCAAGTGATCCACCTGCCTCAGCCT
CCCACAGTGCTGGGATTACAGGTGTAAGCCACTGCACCTGGCCCTTTACCCACTTTTTAGTAGGATGATTTGTGGTCTT
TTACTGTTGAGTTGTTTGAGTTCCTTGTATATTCTGGATACTAGTCCCTTGTTGGATAAATATCTTGTAAATATTTTCT
CCCATTCAACAAGCTGTATCTTCAGTCTGTTGGTTTCTTGTGTAGAAGAATTTTTAGTTTAATATAGTCCCATTTGTCT
ATTTTTCTTTTTGGTGCCTGTGATCTAGAGATCTTAGCTATAAAATCTTTGGTCAGACTGATGTCCTGAATTGTTTTCC
CTATGTTTTCTTGTAGTAGTTCATAATTTTGGGTCTTATGTTTAAGTCCTTAACTGATTTGAGTTGATTTTTGTACAGG
GTGAGAGATGGGTCCAGTTTCATTCTTCTGCATATGGATATCCAGTTTTTTCTATTCCATTTAGTGAAGAAAGTGTCCT
TTCCTCAGTGTATATACTTGGCACCTTTATAGAAAATCAGTTGGTGGTAAATGTGGTATATGCTGGCATCAGTGTTAGT
GTGTCCAGGCGGGCTGATCTGGGGGCTTCCAGTCAGCTTGCTGAGGTGCTGGCAATGGCAGCTGTGGGCCAGGTGGATG
GGCAGGTCCATAGGCCCTGGGCATCAGGCATGGTGTGGGTGATGGCAGTTGCAGTGGCAGGACAATCCTCTGGTACCCA
AGTAGTCCCAACTGATTTTCAAGGTGGCTGCAGGCCATTTCCCAGGCCCACAGGTGGTTCATGTCTGTGGGTGGGGGGT
GTATGCTGGCTGTGATGGTAGTGGCAGGTTGGGTGAACCCATCTCCAGGCCTTCAGGATGAGTGCTCAGGCGCCAACAG
GAATAGATGGGGCTGAGCAATCCCCAGGCCCCTGCATGGGCACTAGGGAGAAGGGAGACAGAGGTGAGCCTCAGGCCCC
CCGATGGTATATATAGGCACTAGCTATGGTAGGCAGGGGCATGGTGATTTCCAGGCCCTCAGTGGAATGCTTGGATGGG
AGGACCAGCAGCTACACCCTAGCCATGTTGCTGGGGTTGCTTTCATTGGCAGAAGCCTTAGGAGGGCCACTGGGAGCAC
ACACTTTGGCCCCAGGTGGTAGTTGCTGGTGGGGTAGCCTGTTCTCAGGGTGCTTCTAAATGTACGGTACCCTGCTGAT
GGGGATGGTGGGTAGCTTCCAGTGGCCCCCACATTGGATATGGAGGCAGCAGCCAGCAGCAGCAGGGTCTGCGTTAGGG
GGAGGTCAATGGGGCTCAAGGAATCTGGAGTTGCAAGGTCTGTGGGGTCCCAGGGTAGGATGCAGTCTGCTGGGCTTTC
AAAATGGTACCTTGCTGGAGTGCCTTAAGAGTGGGGTAAGAGGGAGGGTGGGTGGGGTGACCCAGTGTGAGCTCCCCAT
ATGAAGCAATGCCATCATGGGGTCTCCAGCCAGTGCCCTATGTCCTAGCAATTCATTCTTTGCGCTCCTGGCATTCTCA
AATGTTTTGTAGATGCCTTCTTGTAGCAGCCAGTCTCGTCCCTTTTCTTGAAGTCAATGAGCATCAAATGTGTTCAGGA
TTCATGAAATAATTCTGACAATAATTAGTATTTTTTATAGGAATTGGAACATGGTTTATTGCAGTATACCGCAGTGTTT
GTCAGCTCTAGAACTTACGAAGAAGAGGAAGAGGAGAACAAGTTTGACTCCTGTGAACGTTTTTCCTTTTTTTCTCAGGG
CTTGTGTGGGTCAAAGGACTCTCCAGTGGCTAGGATTGCAGGAGTCCATGGTAGGAAGGTGGGCCACTGGGGGCTACTC
ACCTACTCTTTCCTCACATTAGGGAGCCCCCTCCAGACTCCCTGCTAATCCCAGCTGAGCAGGCTACTTCACTTTCCTC
TTGTTTTTCATGCTAGGTGTCACTTCCGTGTTGAATTCCAGCCTTCTCTCTTAGGTGATCTATTTTTATTTTACAAGTT
AGAAATATAAGTGCAGAGAAGTTAAAACAGCAAATCTGTGGCTTCCAAGAGTGGCAAAGCAGTTTCTAGCCTATGTTGG
CTGAGTTTTGACCAAGCCTCTGATATGCATACACATATATACATGTTCATGTACGTGTACTTAAAACATTTTTATTCCC
ATGTTTAAGGCTAGTTGAATAGGGGTGAACACAGAAAATCCTAGCAATTCATTCTTTGCACTCCTGGCATTCTCAAATG
TTTTGTAGATGCCTTCTTGTAGCAGCCAGTCTCGTCCCTTTTCTTGAAGTCAATGAGCATCAAATGTGTTCAGGATTCA
TGAAATAATTCTGACAATAATTAGTATTTTTTATAGGAATTGGAACATGGTTTATTGCAGTATACCCCAGTGTTTGTCA
GCTCTAGAACTTACGAAGAAGAGGAAGAGGAGAACAAGTTTGACTCCTGTGAACATTTTCCTTTTTTTCTATAATTTACG
CATATGCTAACAAGCAGCTAGTTTCAAAACACAAACTTACCTTGACAGGAACTAGGTCTCACTGTTGAGAATGTAGTCT
CCTCTCTCCCCACATAGCCCTAGGGTTATTCAGGATGAAGGAGAAGAAAAAACATACCCAAGAGCATTTTATAATTCCA
TCCTTCCTTCTTGTTATGCTAAGGTTACTAGTACCATGACCTATGTGAACTCGTTTTCTTGAATAAGAAGAATAAAAGC

Fig. 9.349

GTTCCGTCCATCAAGGAAGACCTCAAGAGAAATTCCAGGTTCAGGTCTCATGGTACAAGAGCCAAGTGTTTCTTCCTGA
ATCATTCCCAGGCCTGCTTTTGATCTGAGCAGTGGCTTTCAAAAAATATGCTGATGAGATTGCTCTCTCACTTAAGAAC
TTAAGAAAGAGTTGAAGTTCTTCAATGTATATCCCCAGCCTGAAACTTGTCTTGAGGAAGATTTGTAGTAGTAATGAAG
GGTGACAGTAACCTAAGGGTGAAGAATGTAGAGAGATTTTTCCCAAGAGCAATCCAAGATACTGCTTGAAACATCCGGG
GTCCACTGACATGCCCCTTGGACTCCAGGAGAAATCTGGAAATGTCTGGACCTGCAATGAGACACACCCAGCTTCAAAT
GTGTCACTCTGGGCATATTCTTTAATCTGAGCTCCAATTTTCTTTCTTGTAAGAGTCATTACACATGGCTGTTTTATTT
ACTAATTCGTTTTTTAAATTAAAGAAATAAATTTGTAGGAGTAATATAGTTACATTGTTTACAAGTCAAATTCTTACAT
GGCTCATTTCCATCCATTTCATGGATGTGTTACCTTCTGGTATTTATTAGAATTTGCTTTAGACTTTCTGTTGCTCACC
TCACAGTTCTTGTGTCATCTTAGTTTCTTTTCTGTTTTTTGGTCTTTTATGCGAGAGGTTTTCCTCACATTGTCTGATA
ATCCTTGGCAGTCAGTTCGTATTGAAGAGTTAGACATTAGAAAGCCAAGTGAAAATCCTGTGTGTGTACAAGGTTTGTT
GACTGGAAAGCTTCATGGGGATATTCTTGCTTGGACATTTCACTGAAGGACATCCAAAAACCTGTTGCCGTTTTTAGAT
TTTTTTTCTTGGATTGTTGGTTTCCTGGTGATCTTACTCCAATCTCTTTGGTGCCATAATTCTACCAGCTGAGTATGA
GAAGGAGCTGGGGTTTCTCAATGCAGAATATGTACTTGGTTCTAATATGGTAGTCTGGTTCTAATATTGTAGCCTTTTT
CTCAGCAATGGTTGCCACATCTGAGTCCTGAATCCCTTTGGAATCAGCCTCTCCAGAGGGTGTATGTTTAGAACCGGCG
TGAGTGAAAGGTAGTCATCCAATGACATGAGGTGGGTGAAAATATTTTAACTGCTTTATTTATAAATTTTCAACTGACC
CTCCTGTTTTTGAAACCCACCAGTGTCCCCACTTCCATAAGTCCCTGGATCCTCAATTTTCCAAGTCTTCCTGGAATTC
TATGGAGTAAATTAGCTTACTGATGCATTTCCCTTACTTGCCTTAGGTTTCTGCTCACTCTGTTCCCAAGTCAATTATG
ACCTACCTGGCTGCTTCCAGTTTCTGAAATGTTGTGTGTCAGCTTCTTTTCCATTGCCTTTGTCCTTGCAAGCTTATGC
CATTTTAAAAAATTCTTTTGCTGTCGTTTTTGTGGAGAAATAGAAAAATATGTACATTCAATCCCCATGTTTAAGTGGA
AGTCCCTCATAAAATTATATTAGAAATTTATTAGAAATATATACACACATATGAATATAGATAGATATACACTCTCTTT
TTTAGCATACATAGTGCCTGTTATTTAGCAGGTACTAAAAAATAATATGTATATGTATATACATGTAGCAGAAGGCTAA
CAGGAACTTAGATACACTCAGGAATATATGATAGCATGGAAGGTTGGAACGGTGGGCCTGTGCACAATCAAGTCATGAG
GACTTAGAAAAAGACGGAACCATGGCTGGGTGCGGAGGCTCATACCTGTAATCCCAGCACTTTGGGAGGCCGAGGCCAG
TGGATTACCTGAGGTCAGGAGTTCAGGACCAGCTTGGCCAACATGGTAAAACTCTGTCTCTTAAAAAAAAAAAAAAAAA
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TGCTGTGAGCCAAGATCGCGCCATTGCAGTCCAGCCTGGGCAACAAGAGCAAAACTCAGTCTAAAAAAAAAAAAAAAAA
AAAAAGAAAGAAAGAAAAGAGAAAAAGAAAAAGAGAACCTGGCAGGATTCAGTAATTAAGCCAGAGTCAGAAGGAGAAG
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GTAGGACTGCACAGACTTGGTTTTGGTTCAGCATTTGGCAATAATCAGTCTTTCTGCTTCAGCCTTCAGAGAGCCCACT
TCATCATTCTTTCTGGCATCCCTGTGATCATATGATTACATATCTAATCAGTGTAACAACAACAGCTACTTAAAGAAGG
CATGCCATTAAAGATATTGTTAATATCTCTACATTGCCTTTCAAACATATGTAAGCATTCTAACTTGGAGTGAAATCTT
CTTAGGTGCTTTATATGTTGAAATTCTACCAGTCAGCTGAGGAAGAAATGTATACGGCTTATCCCCAAAATAAGATATT
CCAACAAATAATGTTTATGAGAGCTGTTAATTTATGTTAAAAAAAAAAAGCTATTAATAAAATGTTTAAGTAATTAAATT
TGGGAGCTTGATTGGCAGTAGGAATATTAAGAGGATTAGCTAGATAACTAATGTAGAAAATAATATAATTGTATTGAGT
CAACAAAAGCTTATATAGATTTAATTACTATGATGATATTAGATTACTTCATAATTAGAATCTTTGTAGAATTGTTTTG
GTATAATTGCATTCACAATACTCAAAAAGTAAGCTTAAAGAATGATATTTTTAATTATTTAATTCCAGTAAGTCATAAG
TCTTATTTTTTGCATTATATGAGGCTGAATTAAAAGCAGAATGCCATCTGACATTTCAAAATTTCATGGAGAGAAATGT
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TGAAATGCTCCAAAATCTGAAACTTTTTCAATGCCAACATGATGCCACAAGTAGAAAATTTTACACCTGATCTCATGTG
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GGAAATAAAAATAAAACTCTAAGTCCCTCCGACTGACCCAGCGGATTCTCTCTTGGCCAAGGGAACCCCAGCAAAACCT
TGGAAGCTGAATTCATGGCTATGATGGGATGGGAGATTTGGCATATGCCTCATTATATCCCCACCCTCGCTAACAGTCG
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GTCCAGATGAGATTCATTATGTTCACCTTATTTTATGTAAGATGTAGATTTACCAGGCACTAACTAAAGTTTTACAAGT
ATGTAATCATTTGTCTCACTGCTGCCCCACCACCTCCCCTGCCTTTTAAGGAAAATATATAAATACTAAACCTCCTAAG
AACCTCTTTGGAAAAAACAGTCACACATGCTTCTGTGACTCTCTATTTTCCCAGGTATGCCTTCAAGCTGGCTCAACAA
AGCTTGATGCTTTGAAACTTATGCTTCAATTACTCATTTCAGTTGTCAGTGTAAAAGGTGTATATGAAATAGAAAAGAA
TTCTGTGTTTAGACAGTTCTCATCAGTGAGATATCTCATTGTGTATATCCCAAAATATTTCAAAAAAATGAAATCCAAA
ACACTTCCAGTTCCAAGCATTTAGGACAAGGGATATTCAATCTGTATCAGAAACATGCGATGGTGACCACAAAAGGAAT
CTGGCAGCTGAAAATTCTGAGTCACTATCATGTCAAACTATAAAAATTTTATACAACTTAAAAAAAAAACCTGCACTAA
TCATTAATTTATATTATTGTTAAAATTATCATACAGTAAAATTGATTTTTTTTCCTTTTGATGTACAGTTCTGAAACCA
CCTTTGCAAAAATTGCAACACTGAGAAAACTTTGACAGTGAAAGAAATTTGACCTAACCAACTCCACATTGCCTTTAAC
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CTCTTTCCAAAACTAAACTGCCTTTGTAAAACTAATGAAAGGCCACCAGTTTACGAAGATAGGAGGGCCTGAATTCTGC
TAAGATATAGGCATAGTTAAGTGATTACCAGCCATTATTCCAGAGGTCACAAGATTTTCAACTTCCTCAATTACTCCTG
TAAATAACGTTACTATTGTAGAACCTAAAATTACTATTGTAGAACCTAAAGTTGACCTTTTGAGATGTCTTGTCAGGCT

Fig. 9.350

TTTGCATTTCTGATGACMCCAGTGTCCTGAACCAGTGACTCCTCTGTGGACCCTTACTGGAAGCTGACTCAGGGCACAC
GAGGACCATTTTCCACACCCATATGATTGCATCCCCAACCAATCAGCAGCACCCATTCCTTTGCCCACCAAATTACTCT
TGAAAAACTCTAGCCTCCAAATTTTCAGGGAGGCTGATTTGGGTAATAATAAAACTCTGGTCTCCTGTTTAGCTGGCTC
TATTTGTATTAAACTCTTTCTCTACTGCAATTGCCCTATCTTGATAAATCAGCTTTATCTGAGCAGCAGGCAAGAAGAA
CCCATTAGACAGTTACAGTTCTGTAAATTTTAACACAAACATTGTTCATGTAACCACCAGTAGGATCACCATCTGGATC
AGTTTCACCACCTAAAAGCTTCCTCATAATACCCTACTCCATGACACTAGGAACAGCTACTAGTTCTCCATCCCAATT
GTTTCATCTTTTGAGAAGTTTATATAAATGGAATTGTATAGTATAATCATCAATTTTAAAATAAAATTTCAGATGTATT
CACATTCCATAAGTGTACTCTATGATGCTGATATTTATCTTTAGCCTCAGCTTATGCCAAACTATGCCTTTCCATATAT
GGCCAAAATGTGTATTCAATATACCTCTAACTGGGAGGATCAATTGAAAGTGTTGTTTTACTAAACTCTATAACACAAA
GGAATTCAAGGATACCATAGGGATCATTCAACTGATTATAACACAAAATGGGGAGAGCCAATTTCCCTGTCCCCAGAGA
CCTCTGGGCAGCTCTAGCTCCCTGAGGGASSCAGCACAACAGTGGTCCCTTTCTCAGGAGATACCTGGGACACCAGGCA
GTTCCTCTTAGACCTTCTGGGAGAGGGGTTCCCAGCAGACGCTGGATAGGAGCAATAGCACTGAGAAGGGGTAGCAGAA
GCAGCAGTGGCCTTGACTTGTGTATGTGCACATATGCAAGGAGCCCTTGCGAGACTCCCTTCTCCCCAGGTAGTAGGGT
CTTGCTTGCCTTGCTAGTGGCAAGAACCACTAAAGTTTAGTTGTTACTGTTAACGTAACCCTATTTCTACTTACAATGT
GGTGAGGCCTTGGAAAACCCAAGTTATATAAACATTTGTCTTAGTTCATTTAGGCTGCTTTAACAAAAATACCATAAAC
TGGGTGGTTTATAAACAACGAACATTTATTTCTCACAGTTCTGGAGGCTGAGAAGTCCGAGATCATGCTGCCAGCAGAT
TCACTGTCTGGTGTGGTCCCATCCCTACACAGTGAAAGCAGCAAGGTCACTTTCTGTGCCTGATTTATAAGGACACTAA
TCCCGATCATGAGGACTCAACCCTCATGACCTAATCACCTATCAAAAAGCCCCATCACCTTAGGGTTTAGGATTTCAAA
ATATGAATTTTGGGTAGACACAAACATTCAGACTGCAGCAACATTCAATAGAGGCAACTCACCTACCAGGAGGCAACTT
TTCATTCTGATGCCCAGGTATGACAGACCTCAAATCTGTTACCGTCCCATGAACCAGGAATTATACAAAGGGTAGAGGG
GCATAGCTCTGGGTGAAGAGCTGCACTCTGTTCACTCTGGGCTCTGTGTGGTGGTGTCCCAGGTAGTGTCAGTCCAGCT
GTTAAGTCCAGTGAGGCTCAGAAAGGTGATGTCATTTGTTCAAATCTTCCAGCTAGTTTGTTGGTCAGATCATAACCAG
ACCCTATGAAGTCTAATCATACCCAGTTCTGTAGGCTTTCCTCTTCAATAGGTCCATTCTTATCTCTAACTGAGACCAC
CTGCATCCTCATAGCTTAACTATCAGTATGGAAAACAAACCATCTGTGTCACTATGACTTTACTATTTGTTCAAGAAAA
TTCTTGTCCAGGAAGATAAGACGGTGTACAATAAATAACATCAATGTTTACTTCAGAAAATTTCTGAAAACCAATTTAT
TCAGATGATAGATTGCTCATTTGAAAAAATAAACCCCTTTTCAGGACAACAGATTCCTCTCCAAGTCTAATAACTTGTT
TATCAAAGATCTATTTTTCAGGACTTCAAGACCCTCTTATCACAATGTCCACCAATTCTAAACTATAATATCATGAACT
TTGCCGAATTTCCACCAGATTTCTTCCTTGAAAGGCCTGACTTTAAACCACTTGAGCTCAGACCCTTAATGTTTATAAA
TATCTACCTGTGACCTCTCCCTTTTGAGAATTATAAGGACTTTTTCAAGGTGTTGCACTCTCTTACTGCAGGTTAATAA
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GGAAGCCTCCCCCACTGCAGTGTTAAGGTAAGTCTCTCATTGGATTTGAGTCCCGGTGTCCTTTCCATAAAGCTCTTAA
ATTGTTTATTTTTCTTCCTAGAAATAAGAAACTTTTAAGAAATTCCTGGATTATCTGATCAGATTTGAAAATGTTTATT
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GCTTACTGTCTGGAGTGAGTATCAAGACTGTGGTACAGAAAGGGAAAACCCAGATGGAACCCTGCCATCTCCCTAAGTG
GAGTCTGGGGAGGGCAAAGTGAGTAGAGTTTGCAAGGAAAGATATGGGAAAGGAGACAGCTGTGCAGAGAGAACACTGG
GGATCTGTACAGGGTCTTCAGCTGAGCATGAGTCAGCATATGCATGTGAGGAAACTACCCATGACTGGGGAAAGAATCA
GCTGGAATGATTACGGGGTATAGAATCCAGGGCTCAGAATCATTCCTGTTTCTATAGGAAATGGGCATTGAGTAGCATA
CTTGGAAGAATTTTTGCTTCAGTCATGCAGTAACATAGAACTTAGACTAAATACTACTCTGATACCACATAATGAAACT
CAAAATAAGACCCAAAAGAATCAAACTGTTTATAAGTAACTGAGTTTCAAAATAAAGTTCAAGAATATTTATAGAAATA
CCATCTAACAAAGCACAAAATTAAGATAAAGGGTCAAACTATTTGCAAGTAATTTTAAGTGTGTTCTAGAACAAAGTTC
AAAAGTATTTATAGAAATACAAAAGGATCCAAAAACTGTCCACAAAAATATGACCCATAATGAAGAGAAAAATCAGTCA
TTTGAAACTAACCCAGAAATGACAAAGATGATAGAATCGGCAAAGACATTAGAAGAACTGTAATTGTACTTCGCATGTT
CAAGAAGCCAGAGGAAAGACTGAACATGGTAAGCAGAAACATGGAAGATATAAAAAGACTAAAAATCAAACTTTAGAGA
TGAAAACATTATGTGAGATGAAAAACACACTGAGTAGAATTAAAGGCAAATTGGAAATTTCAGAAGACTAGTGACTTTA
AGAATTGAGAGATAAAAAGTACACAAAATGAGAAACAGAAGTGTGTCAGTGAGTTATGGGACAACTTCAAACTAATGCG
TAAATTGCAGTCCCTGAAGGAAATGAGGGATATGTTGGAAAAAAATATTTGAAAAAATAATGGCCAAAAATCTCCCAAA
GTTTATGAAAACCACAGATTCAAGAAGGTCAACAAATTGCTTAAAAATAGAGAAAGTCTAATATTAGGATACAAGGTCT
TGACCAGGTGTGGTGGTTCATGCCTGTAATCCCAGCACTTTGGAAGGCCGAGTGGGAGGTGAATCACTTGAGGTCAGGA
GTTCAAGACCAGCCTGGCCAACATGGTGAAAGCCTGTCTCTACTAAAAACACAAAAATTAGCCCGGCGTGGTGGTGCAC
ACTATAATCCCAGCTACTCGGGAGGCTGAGACAGGAGAATCACTTGAACACAGGAGGTGCAGGTTGCAGTGAGCCGAGA
TTTGTGCATTGCACTCCAGCCCTGGGTGACAAAGTGAGACTCCGTCTTAAAAAAGACAAAAACAAAAACAAAAACAAAA
AAATGGAAATAAGGTCTCAAATTAATAACTTCAGCTTACACCTTAAAAAAAATTAGAAATATCATT

Fig. 9.351

Single marker association within the PDE4D gene

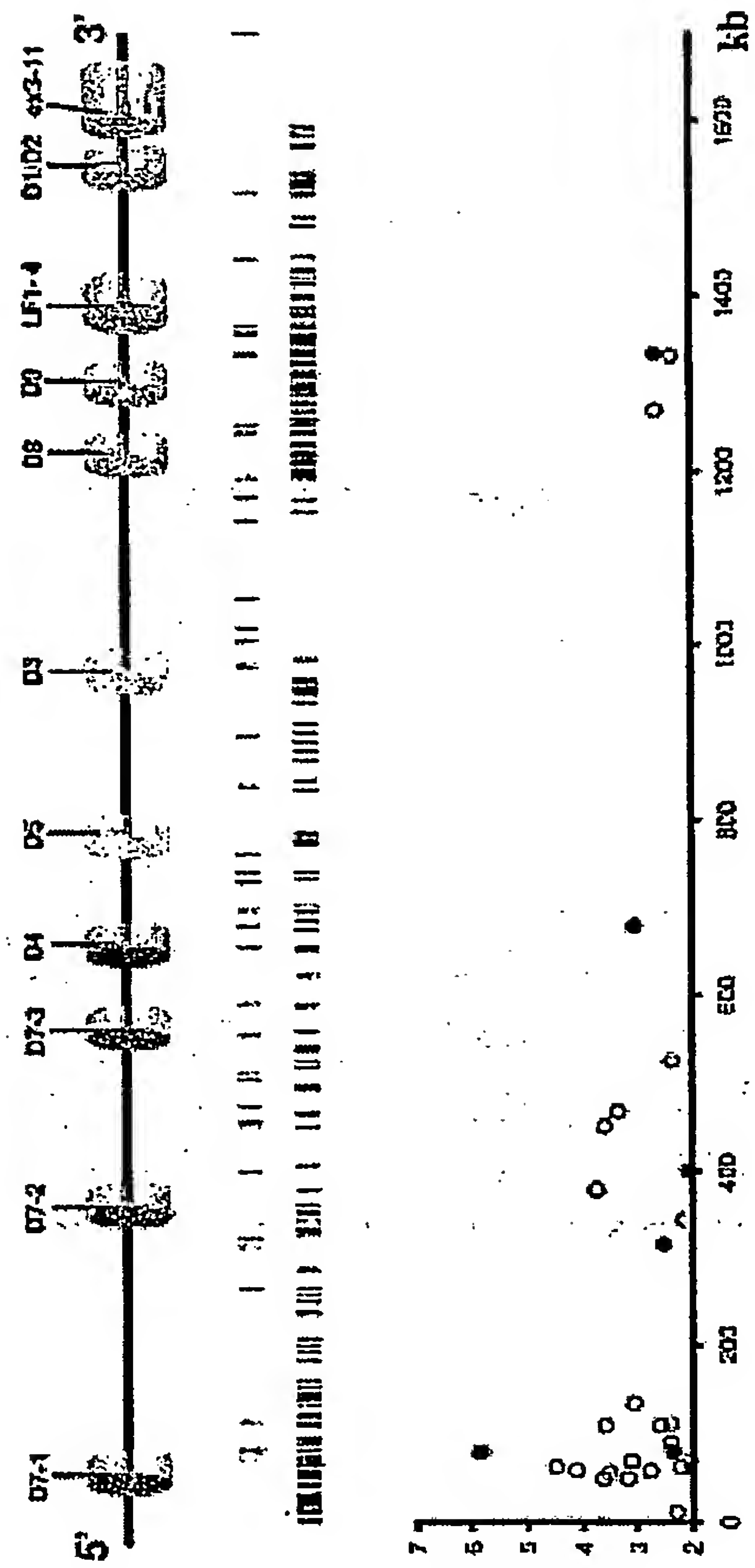


FIG. 10.1

FIG. 10.2

FIG. 10.3

FIG. 11.1

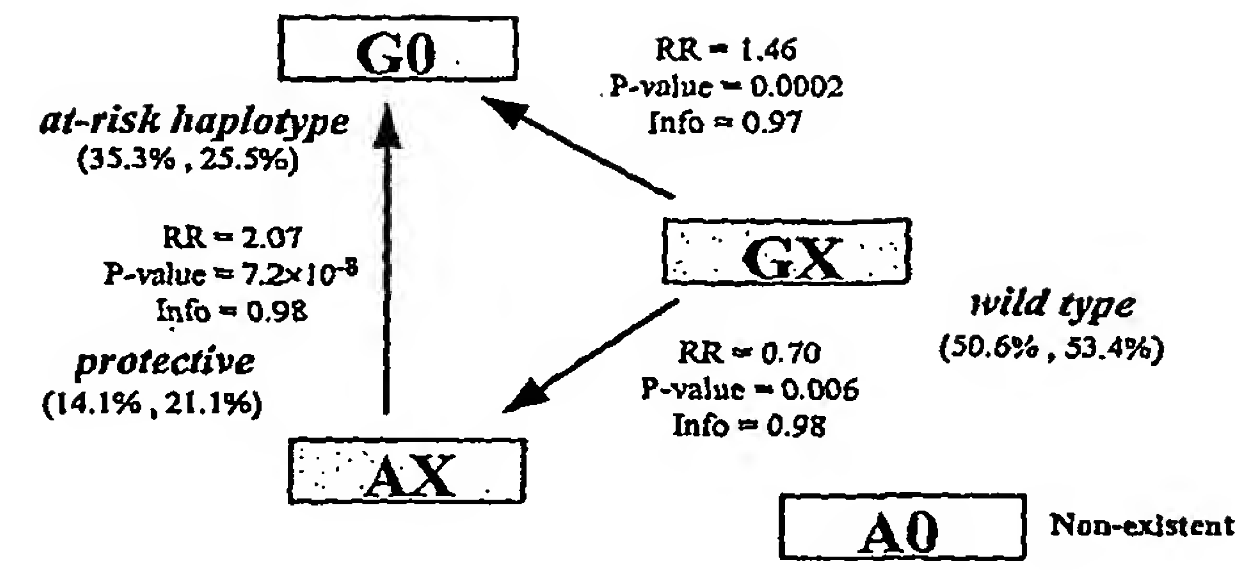


FIG. 11.2

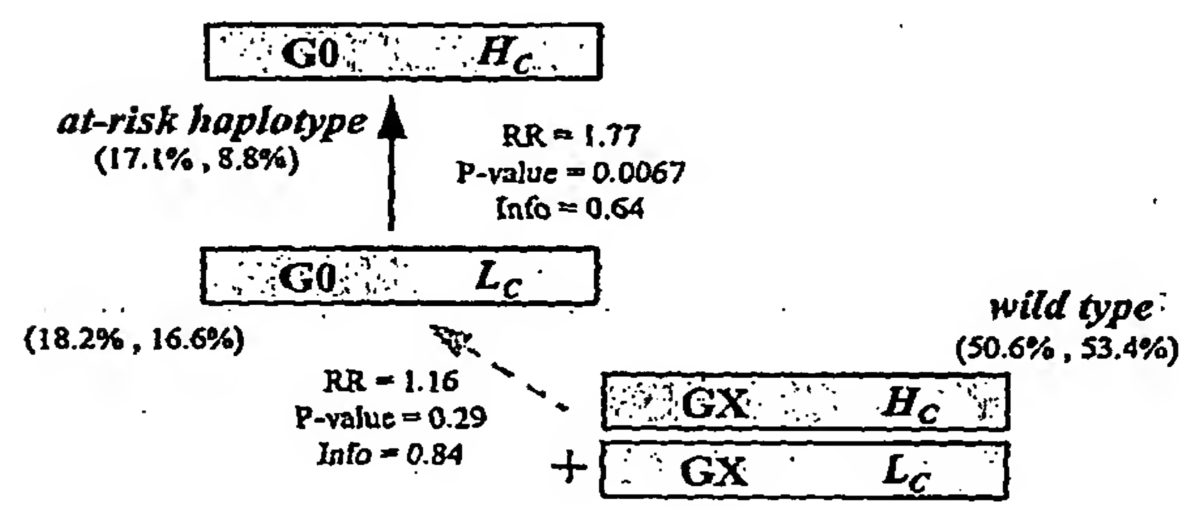
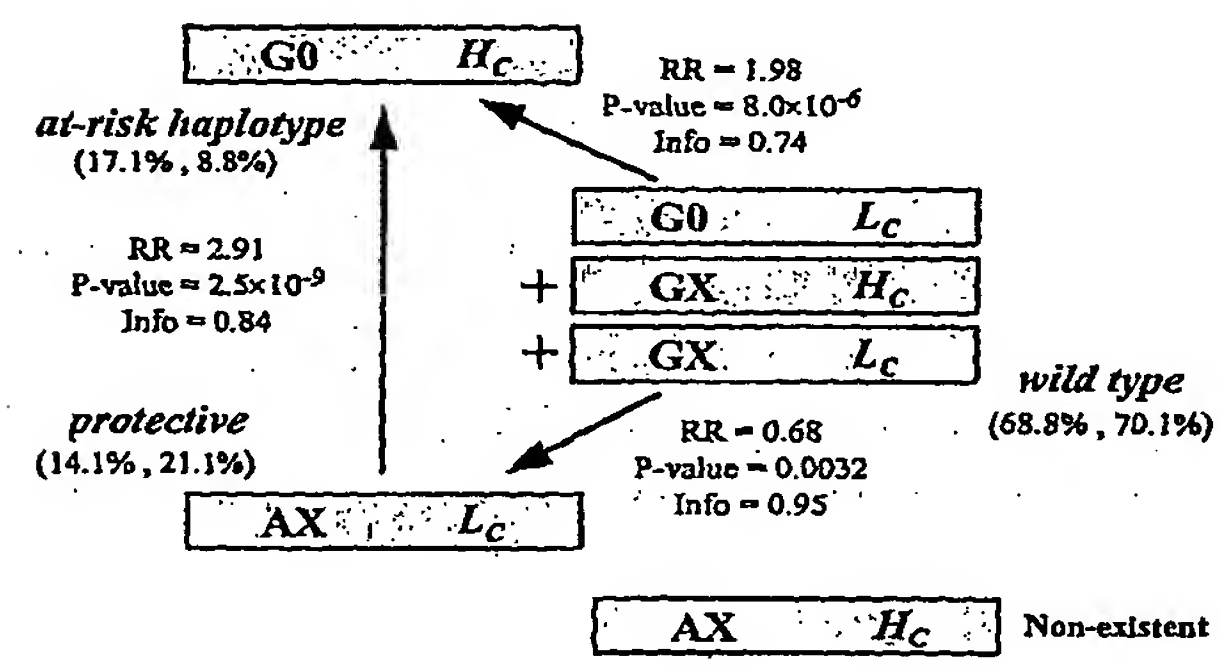


FIG. 11.3



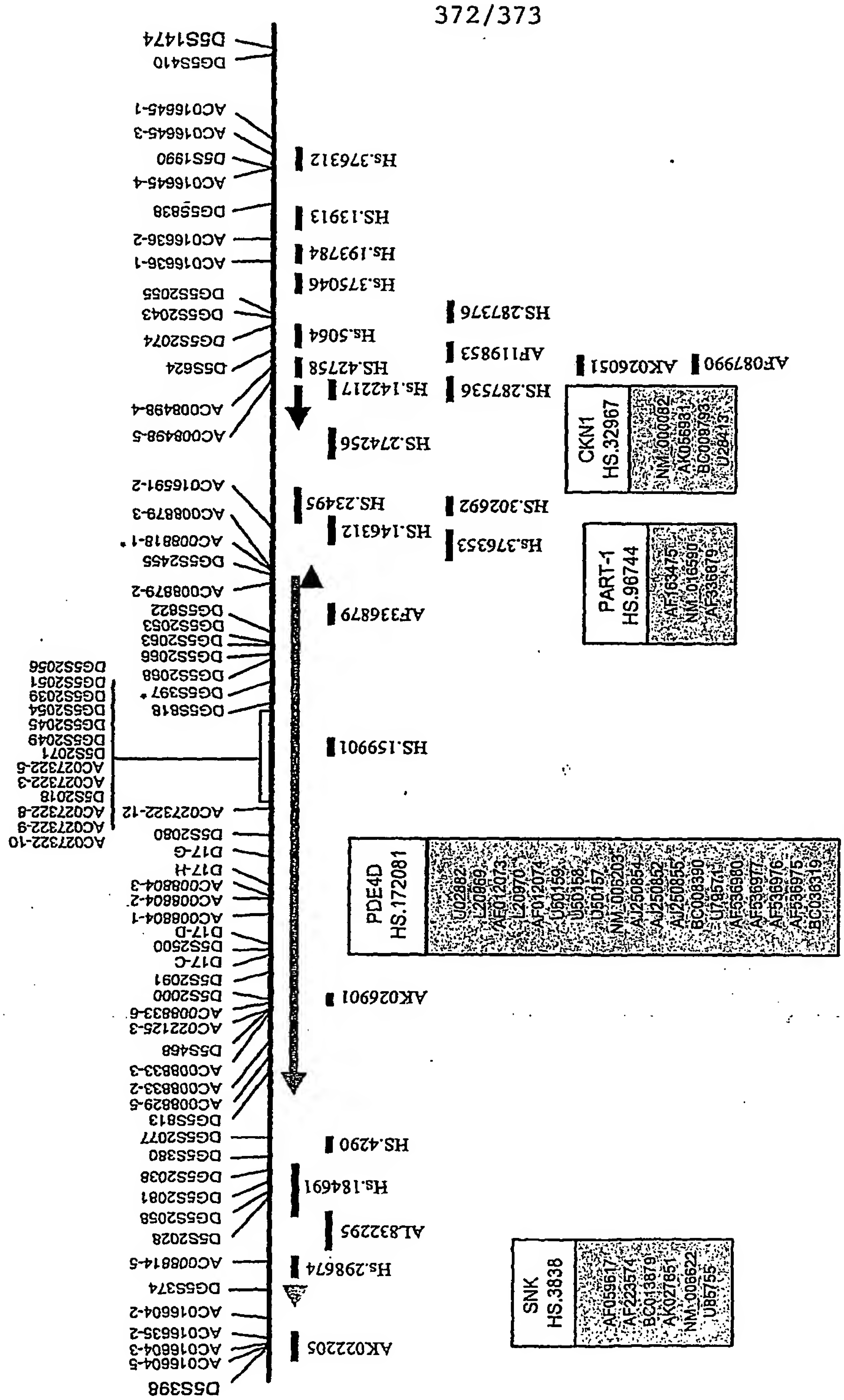


FIG. 12

FIG. 13.1

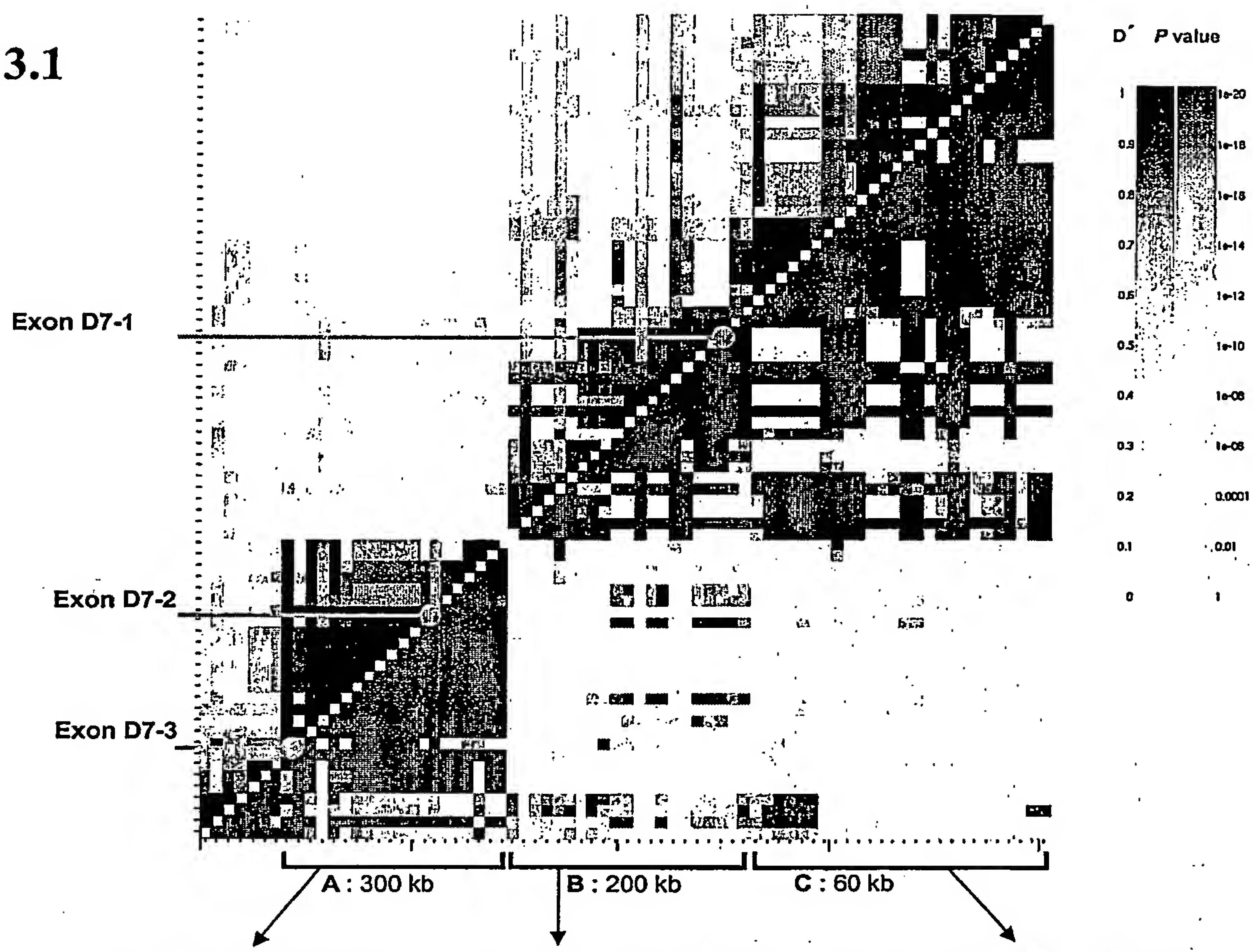


FIG. 13.2

TGTATGAGAGAGTAGCGGTC	AATGTAAGAACAGTACCTGAAT	TAACCACGAACTTATTGAATTTGAA
CGCACCGAGAGACGGCGGTC	AATGTAAGACTAAAATTCAGGA	GAACCACGAATCCGCCGAGCATCAA
CGCACCGAGAGACGATGGAT	GACATAAGAACAGTACCTGAAT	GAACCACGAATCCGCCGAGTTTGAA
CGCACCGAGAGACGATAGAT	GACATGGAGATAAAATTCGGAT	GAACCACGATTCTACCAGGCACCTG
CGCGCGAGAGAGTAGCGAAT	GACATGGAGCTAAAATTCAGGA	GGCTTCCGAACTTATTGAATTTGAA
CACACCAGAGAGTAGCGAAT	GGCATGAGAACCGTGTCTGAAT	GGCTTCCGAATCCGCTGAGCATCTG
CACACCAGAGAGCAATGGTC	GGCAGGAGAACCGTGTCTGAAT	GGCTTCGAGTTCTACCAGGCACCTG
CACGCGAGAGAGTAGCGAAT		

FIG. 13.3

84.0 %	72.9 %	70.6 %